Standardization

News Magazine of the American Standards Association, Incorporated

Chicago: Site of first U.S. International Trade Fair (page 114)

MAY 1950

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Company Members—More than 1900 companies hold membership either directly or by group arrangement through their respective trade associations.

Marginal Notes

International Trade Fair

Plans for the exhibit to be shown by ASA and ISO at the International Trade Fair in Chicago call for featuring the role of standards in implementing world trade and their contribution to international cooperation. The exhibit will show how manufacturers, distributors, governmental agencies, and consumer groups in this and other countries are working together to produce more and better goods for more people. (See page 114)

Television—On the Target!

Everyone who has a television set

NBC Photo

or has an idea he may get one will be interested in the announcement by the Society of Motion Picture and Television Engineers of its new test film. (Page 124) As shown here, engineers run the test film through their projectors to check the accuracy of their projection equipment. The film is, of course, for use in checking motion picture film, not for live shows.

"Magic" Black Board

At ASA's open house last month, when the Board of Directors and executives of organization members were guests, an ingenious method was used to show the details of the Association's operations. Instead of ordi-

nary static charts, a "slap-on" board made it possible to build the history of ASA step by step, and to show how the work of each committee, each group, and each staff member is related to every other. This dramatic form of chart is a plywood board covered with black woolen worsted. Individual cardboard pieces represent the elements of the chart. These "slap-on" pieces are backed with a gum-backed felt which sticks to the surface of the woolen worsted board by means of static electricity generated when the speaker runs his hand firmly over the piece a couple of times. The speaker can use the pieces as notes, holding them so the audience cannot see them. As he comes to an important point in his talk, he illustrates it by placing a piece of the chart on the board.

(Page 117 shows the complete organization chart of ASA as Mr. Veltfort built it up in his talk; page 118 has Admiral Hussey's buildup of the staff organization.)

ASA extends its thanks to the Aluminum Company of America for assistance in developing this interesting display!

Our Front Cover

Chicago, popular convention city, will play host to the First U.S. International Trade Fair to be held from August 7 to 20. Planned to cover all phases of trade and industry, the Fair will be housed in four large buildings and will bid for the recognition accorded the famous, traditional trade fairs of Paris, Lyon, and Leipzig. The American Standards Association and the International Organization for Standardization will have exhibit space in the famous Navy Pier building, pictured both in the montage cover photo and on page 115. *Cover photo by: Kaufmann and Fabry, Chicago.*

Opinions expressed by authors in STANDARDIZATION *are not necessarily those of the American Standards Association.*

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Standardization is dynamic, not static. It means not to stand still, but to move forward together.

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ASA

Reg. U. S. Pat. Off.

Ruth E. Mason, Editor — Dollie Carpenter, Production Editor

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Standardization—

"And because we are credibly given to understand that the often and continual altering and changing of the fashion of armes and armours, some countrys and parts of the Kingdome having armours of one fashion, and some of another, do put many of our subjects to a great and unnecessary charge, and more than need requireth for the avoiding whereof, our will and pleasure is, and we do hereby appoint and command, that hereafter there shall be but one uniform fashion of armours of the same common and trayned bands throughout our said Kingdome of England and domynion of Wales, when as any of the said armours shall be supplied and new made, and that form and fashion of armour shall be agreeable to the last and modern fashion lately set down and appoynted to be used by the lords and others of our Council of Warre (the patterns, whereof are now and shall remayn in the office of our ordinance from tyme to tyme, which is our pleasure likewise concerning gunnes, pikes, and bandaliers whereof patterns are and shall remayn from tyme to tyme in our said office.)" Extract from a Commission issued by Charles I in 1631.

What the Term Means

THE term "standardization" has, no doubt, a well-defined meaning to many people, in the sense that "to standardize" is to make alike those things which have the same purpose or function. The aesthete may have a feeling of revulsion at the sight of the word, as suggesting a change from refreshing variety to drab similarity; others may consider that it stultifies development, and even hinders progress; others, again, look upon it as some recent discovery of the politicians. Let us therefore look back through the ages and see if we can identify it in some form.

Surely the reason that you and I understand each other at all is because we agree to use an accepted code or standard form of speech and writing? Here, then, must be one of the oldest, if not the oldest, type of standard ever devised. If this is not convincing enough to those who imagine that "standardization" is a modern innovation, it may be pointed out that there exists a record of a survey of land inscribed on a tablet from Ur, circa 2200 B.C., so that some standard of measure must have been in use at that time. Gold coinage was introduced by the Romans and was readily accepted by countries outside the empire as a standard of value in exchange for merchandise or labor. The calendar is credited to Julius Caesar, but in Japan the years are reckoned from 660 B.C. (e.g., 1949 is shown as 2609), so that the Japanese may have devised some system of recording dates before even the Romans did so. The Romans also unified or standardized the legal system which formed the basis of codes of law in use in many countries today.

Between these ancient times and the commencement of the industrial revolution in England, a number of other standards were developed. One of the most important concerned the measurement of time, in conjunction with the development of clocks, and involved the division of the day into hours, minutes, and seconds. In another sphere was the ordinance of Charles I, dated 1631, standardizing armor, guns, pikes, and bandoliers. In the same period standards of doubtful usefulness were being created by fashion or for sake of convenience. Sometimes the fear of

ridicule resulted in the creation of a standard: the three-piece suite of furniture, the trouser turn-up, and the inevitable masculine hat-band, with its bow on the left, are recent cases of this trend.

Other examples come readily to mind, and help to set the stage for more modern times. . . .

It was some 40 years ago that the interest of the technical institutions was aroused in connection with the great variety of steel sections and sizes which existed. This led to the formation of the Engineering Standards Committee, which successfully reduced this unnecessarily large number of steel sections to a rational figure. The work of this committee was so well received that it was invited to give its attention to other items in the engineering industry. Some time later it was agreed that the scope of this committee should be widened to include work other than that of an engineering nature, and as a result, the British Standards Institution came into existence.

Progress in other countries has followed a broadly similar pattern, and so, having brought this review up-to-date, we are in a better position to attempt to define our subject.

Briefly, a standard is a means either of giving effect to an agreed practice or of guiding progress along agreed paths. It may either take some physical form (e.g., the National yard as a measure of length), or be a statement containing the most up-to-date and proven knowledge needed to enable the agreed practice to be followed.

In the engineering field, there are four main types of standard:

(*a*) Those which lay down codes of practice for the manufacture of particular products, or for their testing or use.

(*b*) Those which lay down the quality of material or the performance required from manufactured products, and which often specify tests which the materials or manufactured articles must pass.

(*c*) Those which lay down standard dimensions. These may specify ranges of size or the overall dimensions of components, sub-assemblies, or complete equipments, and thus ensure that the products of different manufacturers are interchangeable as regards physical dimensions.

(*d*) Those which define terminology, with a view to securing accuracy of description of articles or processes.

In conclusion, we quote the following definitions, which appear in "The Concise Oxford Dictionary":

Standard, n.—Weight or measure to which others conform or by which the accuracy of others is judged; degree of excellence, etc., required for particular purpose; thing recognized as model for imitation.

Standardize, v.t.—Make to conform to standard; (chem.) obtain by analysis specific value of (solution, etc.) for purpose of comparison. Hence standardization, n.

A partial reprint of a discussion published in the first issue of a new magazine issued by Standardization (Defence), Ministry of Supply, London, England. The publication is called "The Land Standardization Service News" and is intended for distribution to those working directly with the Ministry in its standardization program.

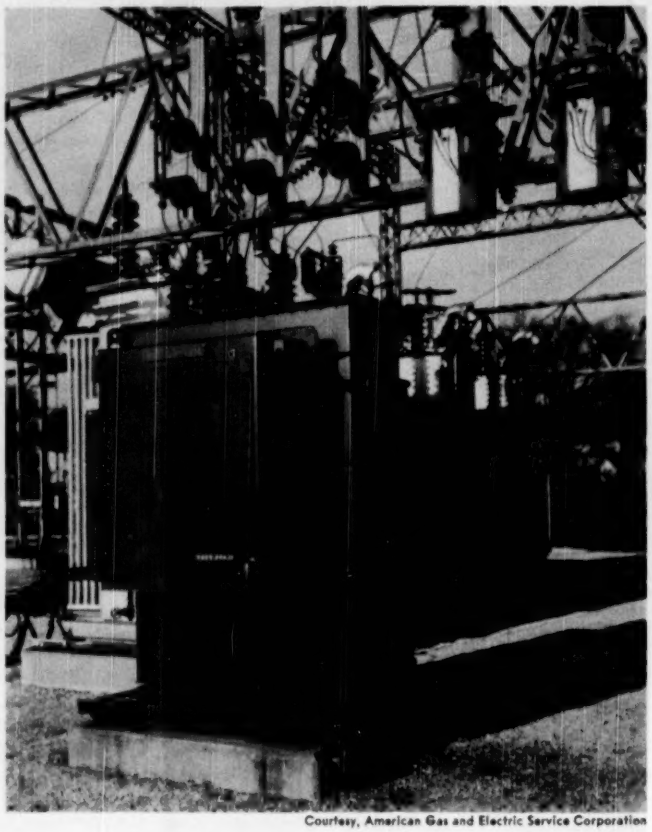
For Good Service on Electric Lines

Standards help prevent undue voltage drop to customers

by W. E. Birchard

J. E. Clem

and J. R. North



Courtesy, American Gas and Electric Service Corporation

THE use of feeder voltage regulators in distribution system design has long been recognized as an economical means of compensating for the inherent voltage drop in lines, circuits, and transformers in order to provide satisfactory voltage at the customer's supply. A feeder voltage regulator will automatically maintain constant voltage at a predetermined point on an electrical distribution system, usually remote from the regulator, within rather narrow limits.

The voltage drops in the various elements of a distribution system can be predetermined and feeder voltage regulators applied at the proper locations to obtain the desired voltage. Thus it can be seen that the voltage regulator has a direct effect on the quality of service provided each user of electricity, and that it is a very important tool for electrical operating companies.

Increased costs of apparatus, material, and labor are directing more and more attention to the economical design of electrical distribution systems.

It is, of course, not possible to hold flat voltage at all points and ordinarily the system is designed to maintain constant voltage at predetermined locations. The voltage at the points of utilization will then vary due to three principal causes: (1) regulator band width, (2) regulator control errors, and (3) voltage drop in lines and transformers. The design of a distribution system must allow for all three factors, and usually narrowing band width or reducing control errors permits more economical system construction because greater voltage drop in lines and transformers can be tolerated. Distribution engineers are therefore vitally interested in the accuracy of control provided for automatic voltage regulators.[1]

Fig. 1 shows an illustrative representation of a distribution circuit with voltage profiles at heavy and at light load. The utilization voltage spread in this case is the range between the voltage delivered to the outlets of the customer nearest the first transformer and having a probable minimum voltage drop in his service and wiring, and the voltage delivered to the customer farthest from the last transformer and having the largest voltage drop in his service and wiring. This voltage spread is shown in this diagram.

Need for Accuracy Standards

Many factors, such as variations in

Mr Birchard and Mr Clem are both with the General Electric Company; Mr. North is with the Commonwealth Services, Inc, Jackson, Michigan. They served as chairmen of the working groups and subcommittees directly responsible for the preparation of the American Standard and Test Code for Step-Voltage and Induction-Voltage Regulators.

[1] Gosinski, J. H. and Oberholtzer, J. R.: Feeder Voltage Regulator Application on Power Systems. AIEE Transactions, 67, 1458-1461 (1948).

temperature, frequency, and load, may affect the accuracy of regulator control devices. For example, variations in ambient temperature may introduce errors in the operation of a voltage-sensitive relay. For what range of temperature variation shall the error be determined, and how and under what conditions shall it be measured? What shall be the reference temperature? Obviously there are many possibilities relative to this and other factors. It is important to both utilities and manufacturers to have universally accepted accuracy standards that answer these questions. With such standards the accuracy specifications for a particular regulator are greatly simplified, and misunderstandings are avoided. Distribution engineers can readily select regulators having accuracies to suit their needs and design their systems to take full advantage of the accuracies selected, without excessive allowance for regulator control errors.

Development of Accuracy Standards

Regulator accuracy has been the subject of much study over a period of several years. A Working Group of the American Institute of Electrical Engineers Transformer Subcommittee published a report on the factors involved in the performance characteristics of feeder voltage regulators in *Electrical Engineering*, July 1944.[2] This Working Group continued its activities, which culminated in the first accuracy for feeder voltage regulators. This was published in the American Standards for Transformers, Regulators, and Reactors, ASA C57-1948.

However, even before publication it was recognized that some of the material in the first accuracy standard more properly belonged in a test code, and the Test Code Subcommittee of ASA Sectional Committee C57 appointed a Working Group made up of representatives from three manufacturers, three utilities, and one university to prepare a Test Code. Segregation of test code material from the standard necessitated revision of the standard, and both jobs were undertaken by this Working Group. The revised American Standard for Regulators ASA C57.15-1949 and Test Code ASA C57.25-1949 are the result.

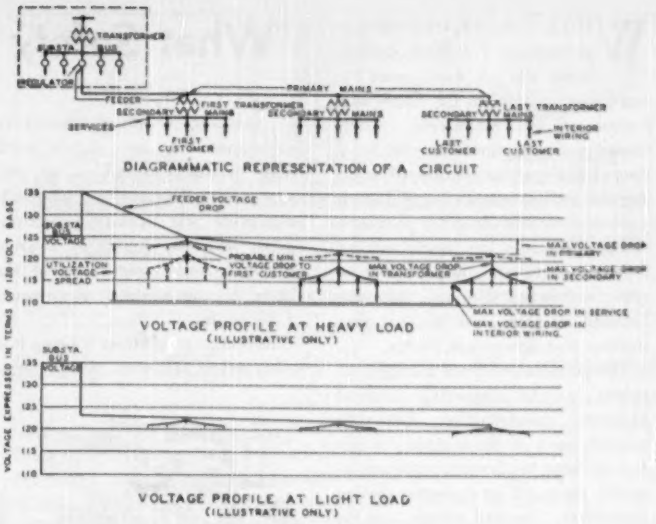


Fig. 1

(From EEI-NEMA Preferred Voltage Ratings for A-C Systems and Equipment.)

How voltage regulator keeps customers' voltage at consistent level

The top diagram represents a typical distribution circuit showing where the voltage regulator fits into the distribution line. The two diagrams below show how the regulator acts to maintain a comparatively consistent voltage on the customers' wires. To counteract the effect of a heavy current load, for example, the regulator jumps the normal 125 voltage to 135, maintaining the voltage of the first customer on the line at a normal 122 to 124 volts (see center chart). Under light load, on the other hand, the regulator drops the voltage immediately to approximately 124 volts thus keeping the customers' voltage at a consistent level regardless of service conditions. The additional loss in voltage experienced by the last customer on the line is due to the normal loss over the length of the distribution circuit and cannot be controlled by the regulator at the substation.

Revised Accuracy Standard and Test Code

Revisions in the standard permitted considerable simplification of the test code, some simplification of the standard, and clarification of both, without altering the essential intent of the original standard. The standard lists five significant errors to be included when determining the accuracy class of a voltage regulator, and defines three accuracy classes. These classifications provide a convenient means for rating the over-all accuracy of a regulator. However, no attempt is made to determine the probable maximum actual combined error, which will always be less than the sums of the maximum individual errors used in determining the accuracy class. This would involve determination of the probability of coincidence of the several plus and minus errors resulting from the various factors, a problem as yet unsolved.

The Test Code specifies procedures for determining the several errors included in determining accuracy class.

It is felt that the revised Accuracy Standard complemented by the Test Code will be more workable than its predecessor.

(Continued on page 134)

[2] Accuracy of Control Devices for Feeder Voltage Regulators. Report of a Working Group of the AIEE Transformer Subcommittee. *Electrical Engineering*, 63, 250-254 (July 1944).

What *Safety* Means to Employer

by Armand Hecht

WHILE I wouldn't be allergic to making a million dollars some day, I don't want to make that million on the bones and bodies of my employees. Aside from my conscientious scruples, however, I believe my chances of making the million are better if I keep my bakery a safe place for people to work. Men who can work without fear of injury are able to produce more and better than men who are haunted by fear—and it's that production that determines profits.

The total losses from a single accident can be staggering—medical expenses; compensation; lost time and efficiency of the injured, his fellow-workers, his foreman; idle equipment; damaged equipment; spoiled ingredients; lowered morale, and the accident proneness of all workers for a while after a man has been injured.

Some of these costs are difficult to figure exactly, but all are real, and their sum may mean the difference between net profit and net loss. From the point of view of money alone, every thinking bakery operator must feel the need for an effective safety program.

Satisfaction in Safety

In addition to the money angle, however, there is satisfaction in knowing that a plant is operating as safely as can reasonably be expected. In our fast-moving life a man needs the inner peace that comes from treating his fellow humans decently. As we progress in this scientific age, it is inconsistent with our industrial development that men should work under primitive conditions of personal safety. The employer who fails to provide safe working conditions cannot truly be considered a great industrial leader, regardless of the size of his operations or the amount of his profit.

Currently, great stress is being laid upon public relations. Large firms

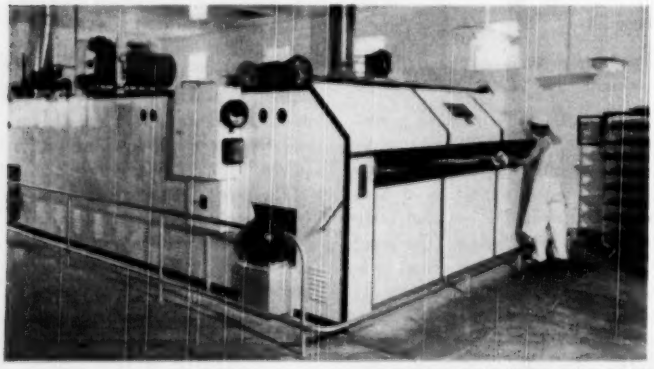
set up whole departments to maintain favorable publicity and woo the good will of the potential buying circle. A bakery is, by its very nature, an intimate business: practically every family uses some bakery products, and the name of the local bakery is a household word. People generally tend to sympathize with the little individual workman rather than the big powerful company without inquiring into the facts of an accident, and it takes a lot of public relations work to offset the harm done by one mishap. Can any firm afford to jeopardize its community standing by sustaining a high accident rate?

Sometimes it is unreasonably hard to "sell" safety to the employee in spite of the fact that he has so much at stake. An accident that causes injury usually has more far-reaching effects on the worker than on the employer because the worker's losses are more elemental. An accident whose costs force the bakery to curtail an expansion program may easily cause the worker's child to go to school without breakfast and a warm coat. An injured worker almost always has to adopt a lowered standard of living for himself and his family. He often uses up the savings he has accumulated for his old age, for his children's education, or for the purchase of his home.

In addition to his direct costs, there are others, harder to figure, and variable with the individual. When the head of the family is injured, the family may have to employ outside help on some jobs. If he has had a hobby that has brought in extra income, that probably has to be put aside. If there's a permanent disability, he has to adjust his whole life to the lessened income—and also to his own handicap. To many people this "differentness" is a constant lifelong embarrassment. While some people are able to rise above their physical handicaps, few of us know the effort it costs them, nor can we guess to what greater heights they might have risen without their deficiencies. In case of fatality, no one should presume to try to compute the loss to the family.

Idleness Is Torture

An injured employee suffers pain, shock, and then idleness. The idleness of the recuperative period tortures some people. And during that period when he is unable to return to work, a man has a lot of time to



Royal Baking Company, Ogden, Utah

and Employee

think. You can be sure that for every time he thinks, "Why didn't I shut off that machine?" he'll think ten times, "Why didn't the Company have that machine fixed so it would shut itself off?"

In general, large plants have made more progress in safety than small ones. Some small firms, unable to afford a full-time safety man, feel they can't do anything. Accident prevention programs can, however, be designed for even the smallest operations, and certainly should, since a serious accident is harder for the small firm to weather than for the large one.

A safety program for any size plant cannot just be taken out of a book, given some publicity, set in motion, and then forgotten. A whole up-welling of safety consciousness must precede any formal plan. This safety-awareness must engulf every person without exception. It must dwell particularly and never-endingly with the foremen and supervisors.

Fortunately, safety-consciousness is one of the most contagious things in a bakery. Let a guard be put on one machine, and the need for similar guards on other machines is immediately noticed. Should anyone continue to be immune to safety, however, let us remember that continual informal "talking it up" with individuals is worth a hundred formal "pep meetings."

Any safety program involves both mechanical and human factors. While both are the concern and responsibility of the employer, it is through the mechanical factors that he first gives evidence of his sincerity. When the safety-minded bakery operator receives new equipment, he installs it carefully to avoid the overcrowding that creates housekeeping problems detrimental to safety. He never puts new machines into use until he has visualized all their hazards and made corrections. In this he must go beyond the manufacturer who oftentimes fails to observe his equipment under actual production conditions, and therefore provides only obvious guards. Or the manufacturer may omit safeguards that would raise the cost of his machine. No matter what the cause of omissions, it is up to the employer to see that all needed safeguards are installed.

Surprised at Safeguards

Let me give an example: Recently a production service man visiting our plant had occasion to raise the cover guard of our bread-dough divider. He expressed surprise when the machine automatically stopped. We had put on this automatic device when employees had raised the guard to pull out scrap dough from behind the ram. This service man, though he visits about 50 bakeries a year, had never seen a similar safeguard on a divider, although he readily admitted the need for it.

The employer, then, must look

(*Continued on page* 131)

Safety in Bakeries Is Purpose of Campaign

These "slugs" are being distributed to bakery and bakery equipment magazines on the recommendation of the Sectional Committee on Safety Code for Bakery Equipment, Z50. Armand Hecht, of Hecht's Bakery, Inc, Bristol, Tennessee, chairman of the committee, is handling the campaign. A series of articles on different phases of the safety problem and on use of the standard is being prepared for the magazines. The project is sponsored by the American Society of Bakery Engineers.

Safety in the bakery is referred to here but the principles and ideas expressed are applicable in any plant. This article is the first in a series prepared by the Z50 Sectional Committee in a special campaign to bring the American Standard Safety Code for Bakery Equipment, Z50.1-1947, to the attention of the organizations that will put it into practice. The Z50 Committee is sponsored by the American Society of Bakery Engineers under the procedure of the American Standards Association.

The author of this article, Armand Hecht, is well qualified to discuss the subject of safety in the bakery. He is president and general manager of Hecht's Bakery, Inc, Bristol, Tennessee. A graduate of the American Institute of Baking and of Dunwoody Institute, he also received a B.S. in Chemical Engineering at Virginia Polytechnic Institute. Mr Hecht is chairman of the Z50 committee.

Plan International Trade Fair — Largest U.S.

By Dr Jacques Kunstenaar

THE First United States International Trade Fair is following the pattern of European trade fairs as produced during the last 35 years. It adheres in objective and operation to the definition of a trade fair as set forth by Edouard Herriot, founder of the Lyon International Trade Fair, mayor of Lyon and repeatedly Premier of France. His description of a trade fair—a common meeting place where "in a minimum of time, with a minimum of outlay, the maximum of business" can be transacted—adequately tells of the purpose and direction taken by the First United States International Trade Fair.

While international trade fairs might appear to be comparatively modern devices for the consummation of the world's business, the Leipzig Fair can boast a history of seven centuries. The Leipzig Fair is a direct descendant of the medieval market place. Other markets disappeared with the advent of industrialization, but the Leipzig Fair changed with conditions and blossomed forth as the modern international trade fair.

Elements of International Fair

The Directors of the First United States International Trade Fair have examined the progress records of European ancestral markets and have formulated their plans upon the basic principles which have proven successful for these time-tested commercial events. The elements which have been found to make for a true international trade fair have been welded into a positive program for the stimulation of the exchange of goods between nations. These elements, which cannot be ascribed totally to any other medium, are: (1) infinite varieties of products may be examined, tested, and compared; (2) representatives with authority to transact business are on hand; (3) an atmosphere conducive to business exists and information on matters of international transactions is available.

International trade fairs in Europe follow, in the main, the pattern of classified exhibits by commodities. This system has been adopted for the First United States International Trade Fair which has devised 29 classifications of products. Thus, the prospective buyer may choose from many sources and compare products of many manufacturers, and remain in a single area.

Fairs Originally Subsidized

Many fairs in Europe were government subsidized and were given active government assistance in promoting the fair in other countries and in encouraging foreign participation. However, most of these trade events became self-sustaining and later showed profits from sale of space, admissions, and advertising revenues.

While the First United States International Trade Fair receives no grants, loans, or subsidies from government and is operated by a non-profit corporation through private-business subscription, the United States Department of Commerce, through its Fairs and Exhibitions Branch, provides cooperation and guidance to Fair officials.

While the European fairs turn profits into new construction, improvements, and publicity, officials of the Chicago Fair plan to turn any accrued profits into enlargement of facilities and services for future fairs.

Must Foster Export and Import Trade

"International trade fair" is a designation applied to fairs which stimulate imports as well as exports. However, many fairs in Europe adopted the title "international trade fair" but retained the basic character of an export fair. Even the invitation to foreign exhibitors to participate, in most cases, failed to show a marked change in the general flow of merchandise at these events.

Among the fairs which most closely adhere to the recognized standards of international trade fairs, as regards the balance of export and import ac-

The first U.S. International Trade Fair is already scheduled to spill over into four spacious Chicago buildings; as plans grow, more room than that may be needed. The International Amphitheatre will have an international automotive show; the Navy Pier (shown on the opposite page) will house consumer products, service groups, government, travel, and miscellaneous exhibits; basic raw materials will be shown in the Coliseum; and liquor, wine and beverages, in the Arena. The Fair will be the largest indoor show ever held in the United States.

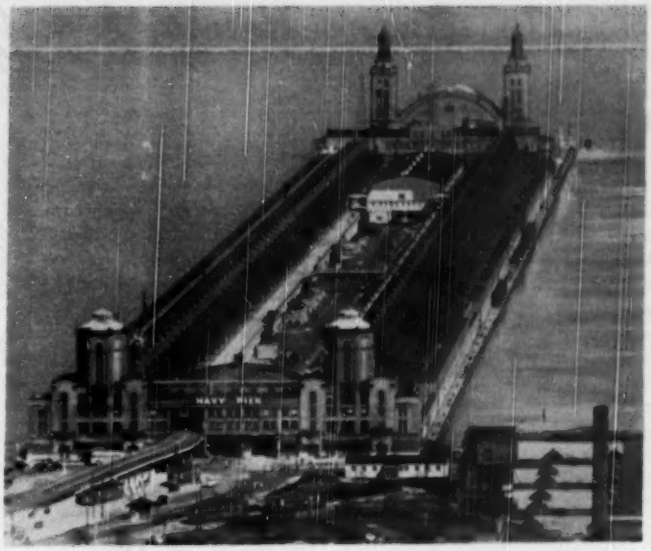
Indoor Show

tivity, are: Leipzig, Brussels, Prague, Lyon, Paris, Utrecht, Poznan, Milan —and now, the First United States International Trade Fair in Chicago.

It has been officially stated that the United States can and should import an additional $2,000,000,000 worth of the world's production without adverse effect on American production. Thus, the Fair in Chicago provides the vehicle for moving the commodities from abroad. And, according to definition, this Fair is truly international with its stress on imports.

Examples of Balanced Promotion

The Canadian International Trade Fair is an example of a fair which has maintained a fine balance between import and export promotion. Approximately 45 percent of the space contracts were held by Canadian exhibitors, while 55 percent of the space was rented by foreign exhibitors. Sixty percent of the space occupied at the spring 1949 Utrecht International Trade Fair was devoted to foreign exhibits, while over 50 percent of the exhibits at the Brussels International Industries Fair were also of foreign origin.



ASA and ISO exhibts will have display space in the famous Navy Pier.

It might appear paradoxical that trade fairs have recorded their greatest expansion during troubled times. The most significant of the European trade fairs were born immediately after or during World War I, and had their greatest growth during the economically-unbalanced 1930's. However, the thriving of fairs during periods of shifting economic and political conditions may be understood in light of the fairs' function.

Sustains Economy

During times of limited transportation of goods and persons, due to war, and the curtailing of advertising and promotion, the trade fair serves a great need. When salesmen are few and the vital need for an exchange of goods mounting, as during war, the trade fair solves the basic problems of sustaining an economy. For, at relatively low cost, on a single trip, the producer is able to meet the important buyers in a concentrated period—and under the most favorable conditions for transacting business. And again, during periods of economic unbalance, when advertising and promotion budgets are reduced, when maintaining foreign sales staffs is too expensive, producers may exhibit at trade fairs and sell in large volume.

The ASA and ISO in the Trade Fair

RECOGNIZING that agreement on standards is a potent factor in smooth international trade relations, the American Standards Association and the International Organization for Standardization have signed for an exhibit at the International Trade Fair in Chicago, August 7-20. Many experiences have shown that interchangeable dimensions, uniform test methods, standard definitions of terms, and standard ratings of equipment and machinery may spell the difference between a satisfactory export trade and misunderstandings costly to both buyer and seller. As in the case of mica (April, p. 84), committees of the International Organization for Standardization give an opportunity to iron out differences of viewpoint between user and producer countries and make it possible to correlate their standard practices.

Estimates indicate that 41 countries will participate in this First U. S. International Trade Fair. These will include the 16 Marshall-Plan countries, Western Germany, Japan, Yugoslavia, Czechoslavakia, Finland, Rumania, and Latin-American countries. Exhibits covering one million feet of floor space will range from mass-produced consumer goods to expensive heavy machinery, as well as national exhibits of cultural, handicraft and "typical products" of each nation.

Dr Jacques Kunstenaar is Director of Foreign Affairs for the First United States International Trade Fair. He is on leave from his post as chief of the Fairs and Expositions Branch of the Office of International Trade of the U. S. Department of Commerce.

An Open House for Executives

MEMBERS of the American Standards Association's Board of Directors and Conference of Executives of Organization Members studied how the ASA operates at an open house held for them in the Association's offices March 23. Charts built up step by step as the story unfolded showed how the ASA has been developed over the years and how it operates now. One of the highlights of the meeting was the presentation of case histories by staff engineers who told the story of a number of typical standards and showed why the procedures which resulted in their approval as American Standard had been a service to the producer and user groups participating. (See pp 119-123.)

Resolves Controversies

"The most dramatic and most valuable services that the ASA has rendered have been in the resolving of controversies," declared Dr P. G. Agnew, ASA consultant, who presented the history of the Association. Dr Agnew had taken office as the first full-time staff secretary in 1919, soon after the American Engineering Standards Committee was organized, and had served as head of the staff until his semi-retirement in 1948. He showed the development of the organization from a correlating committee of five technical societies and three Government departments[1] to today's federation of 101 associations and societies, supported by some 1,900 company members.

The Standards Council, responsible for the technical direction of the Association, shares the supervision of the Association's activities with the Board of Directors, T. E. Veltfort explained. Mr Veltfort, manager of the Copper and Brass Research Association, is chairman of the Committee on Procedure. This committee advises the Council when questions of interpretation arise, and helps to find methods of simplifying and clarifying the procedure. The Council is made up primarily of technical men interested in developing and utilizing standards, who represent the association and society members of ASA. They are concerned with carrying out the basic principles of ASA, Mr Veltfort explained:

1. To encourage and facilitate the development of standards by any and all groups qualified to produce them.
2. To coordinate the work of the various standards-producing groups so that standards of broad, if not universal, application may be assured, and to eliminate duplication, inconsistencies, and confusion in the standardization movement.
3. To approve for designation as American Standards those of appropriate scope and application which represent the consensus of all who may have substantial concern with the standards.

"The Council has to steer a careful course between the temptation, on the one hand, to waive responsibility for maintaining ASA principles and rapidly enlarge the list of American Standards through quick approval of available standards by dangerously short-cutting the procedure . . . and on the other hand, to freeze the procedure into a super-safe static barrier through which the standard must follow a discouragingly long and tortuous path toward approval," Mr Veltfort explained. "The earnest cooperation of every member of the Council as well as the sympathetic understanding of the member bodies will be required to lay a course which will secure the most effective results, maintain the significance and prestige of the American Standard, and assure the continuation of the outstanding progress which this country has made in standardization."

The procedures supervised and administered by the Standards Council are applied in several different ways in developing American Standards, Cyril Ainsworth, technical director of ASA, said. Of the several recognized methods, the most widely used is the sectional committee method, he explained. A sectional committee is organized under the sponsorship of one or more national associations or technical societies. All groups with an important interest in the subject —manufacturers, distributors, users, government organizations, and general interest groups—are entitled to membership, and have an inherent right to take part in the development of the standard. (See page 121 for an example of an American Standard developed under the sectional committee method.)

When a standard developed by a national society or association qualifies as an American Standard, it can be approved by ASA under the Existing Standards method. To qualify, the standard must be shown to have received acceptance by those groups with an important interest. (See page 120 for example.)

Conference Method Used

In some cases a standard can be approved as American Standard by the General Conference Method. Usually, in this case, a proposed standard has been prepared by some group particularly concerned. The facts are presented to a conference to which all groups with an important interest have been invited. On the recommendation of such a conference, ASA approval can be given. This method has been used in the case of such diversified standards as the inch-millimeter conversion ratio and the cooking utensil standard proposed by the American Home Economics Association (see STANDARDIZATION, January 1950, page 1). Manufacturers of cooking utensils worked with home economists to provide an American Standard acceptable to all.

The 58 Member-Bodies are the organizations that are responsible for the ASA. These are national associations and technical societies which

[1] The American Institute of Electrical Engineers, the American Society of Mechanical Engineers, the American Society of Civil Engineers, the American Institute of Mining and Metallurgical Engineers, the American Society for Testing Materials, the War Department, the Navy Department, and the Department of Commerce.

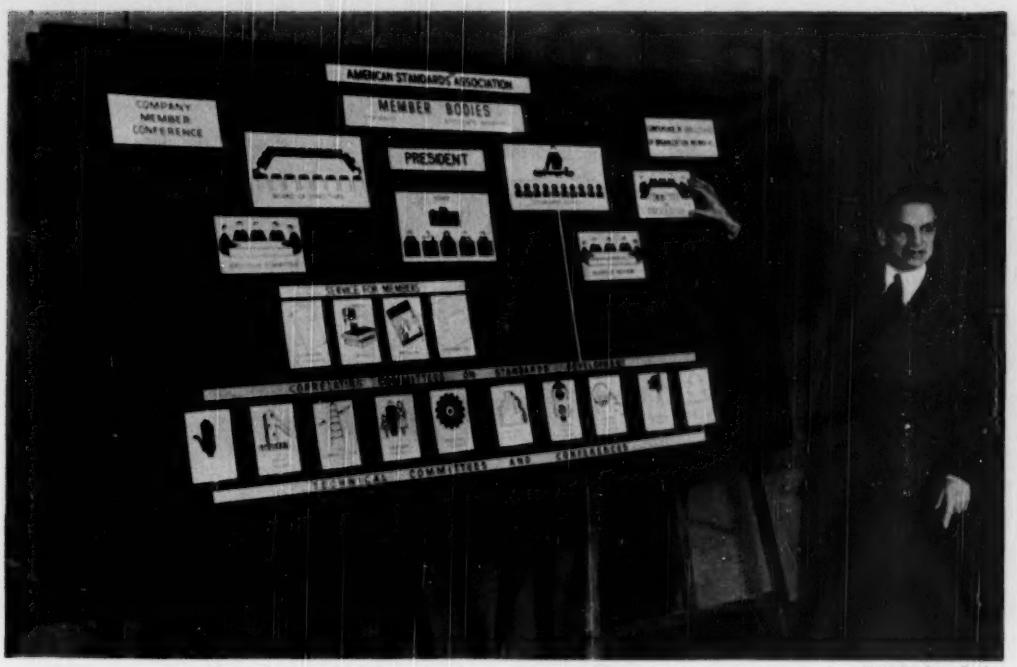


Photo by Gene Dauber

T. E. Veltfort, chairman of the Committee on Procedure, explains how the Standards Council and its committees carry out the procedure of the American Standards Association to maintain the significance of "American Standards" approval. Each step contributes to ASA assurance of a "consensus" on all approved American Standards.

administer the work on standards through their representation on the Standards Council. They take turns in nominating members of the Board of Directors to guide and direct the financial policies and general administration of the Association.

To bring the managing executives of these organization members into closer relationship with ASA, a committee (now the Conference of Executives of Organization Members) was set up in 1944. W. J. Donald, managing director of the National Electrical Manufacturers Association and chairman of the Conference, explained its objectives:

1. To promote a better understanding among association and technical society executives of the American standardization movement.

2. To facilitate the exchange of information among member bodies and associate members regarding their respective standardization activities, policies, and procedures.

3. To promote a better understanding among ASA's organization member executives of the purposes, policies, procedures, and operations of the American Standards Association.

4. To provide a means for staff executives to discuss matters of mutual interest to ASA and its member bodies and associate members.

5. To make available to the Board and officers of the association a group whose advice on request might be helpful to the advancement of the ASA.

"It is up to us as trade association and technical society executives to be familiar with the pulse of opinion in our constituencies, and I hope you will call on us frequently in your efforts to broaden and strengthen the ASA federation," Mr Donald said.

Company Members Meet

Company members also have an organization through which they keep in touch with the work and policies of the Association. E. W. Gardinor, International Business Machines Corporation, chairman of the Company Member Conference, explained how the Conference makes it possible for company members to bring their suggestions to the attention of the ASA. Proposals for new standardization projects and for making American Standards more valuable to both producer and user have been discussed in the Conference and a number of cases have been brought to the Standards Council for action by all the groups concerned.

The American Standards Association is the United States member of the International Organization for Standardization and as such presents the viewpoint of its members for international consideration. Despite its outstanding industrial position, the United States is taking an active part in only 18 of the international technical committees, Vice Admiral G. F. Hussey, Jr, managing director of ASA, pointed out. Citing the experience of certain American manufacturers who had found their American-made equipment prohibited by law in one European country, Admiral Hussey said: "By turning down

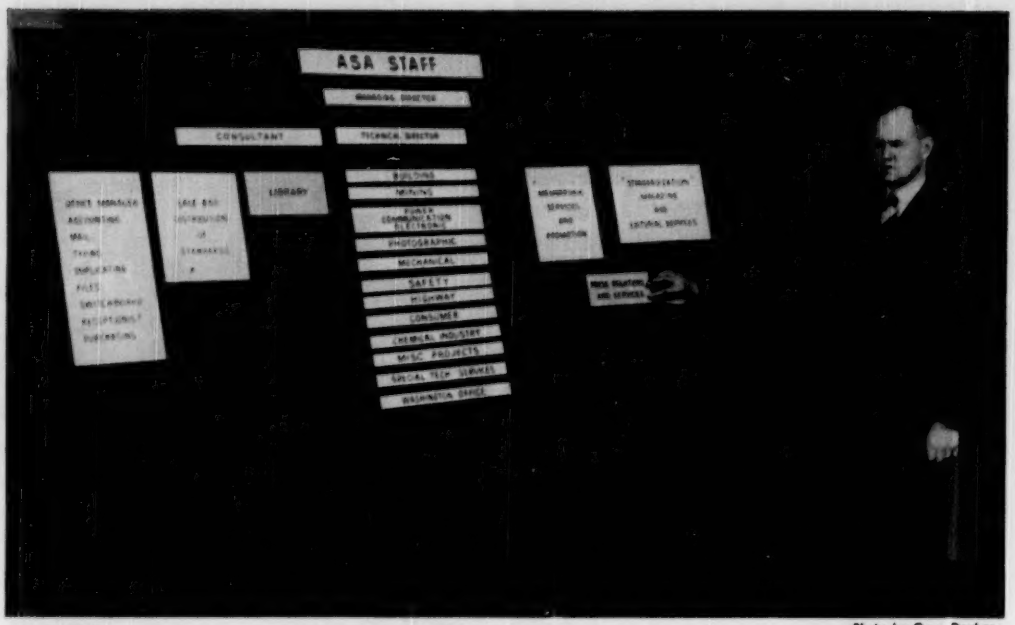


Photo by Gene Dauber

Admiral Hussey points out how staff engineers act as secretaries of correlating committees and spearhead ASA services to members and sectional committees; office assistance—typing, records, duplicating, and others—implement their work. Promotion, library, and information departments carry ASA's story to the public.

opportunities to participate in ISO technical committees, various industries are missing opportunities to get their viewpoints before industrial groups in other countries throughout the world. I am hopeful that within the next few years the United States will be participating in more than 18 projects."

G. P. Paine, director of promotion of ASA and secretary of the Conference of Executives of Organization Members, explained:

"Your federation is composed of 101 trade associations, technical societies, and consumer organizations. About 1900 corporations are affiliated as Company Members. Members of your federation are located in every state of the union but one."

The Member-Bodies and Associate Members are the operators of ASA, Mr Paine explained. Member-Bodies pay dues of $500 for each representative on the Standards Council, limited to three representatives to insure a well balanced governing body. They also nominate 15 of the 21 members of the Board of Directors.

Company Member dues form the backbone of ASA's financial structure. They furnish between 85 and 90 percent of ASA's income and provide the money to run the organization.

Informational services keep both Member-Bodies and Company Members informed on standardization matters. These include notices of newly approved standards, use of the ASA's library of some 50,000 standards, specifications and related material, and copies of STANDARDIZATION.

What the Staff Does

Not only does it take members and money to run a national association such as the ASA but it takes a staff, commented Vice Admiral G. F. Hussey, Jr, ASA's managing director, as he prepared to show what ASA's staff is and what it does. Seven staff engineers serve as secretaries of the correlating committees in their respective fields. They also handle the tremendous volume of correspondence and innumerable details involved in negotiations between committee members, sponsor organizations, correlating committees, and Standards Council in completing approval of American Standards. Each of these engineers handles more than one field of activity. An engineer is also on the staff to help in providing special technical services. He translates standards from other countries and helps to answer technical questions. The ASA works closely with the National Bureau of Standards and an ASA staff engineer is located in the Bureau's offices to maintain liaison. He also spends a large part of his time on building standards in cooperation with government and industry groups in Washington.

This technical staff works under the supervision of the technical director, who in turn reports to the managing director.

The managing director heads the entire administration and is responsible to the Board of Directors and Member-Bodies for the way the or-

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Wood Poles in the National Economy

by J. W. McNair
Electrical Engineer, ASA

American Telephone and Telegraph Company

SOME indication of the importance in the national economy of the American Standard project on wood poles can be gained from the fact that it is estimated there are some 80,000,000 wood poles installed in the various power and communication lines in the United States. There have been times when as many as 8,000,000 wood poles have been used a year; at the present time this figure is around 4,000,000.

In 1923, upon the request of the American Electric Railway Association, the project on wood poles was formally initiated under the sponsorship of the Telephone Group.

At the time there were at least three specifications for wood poles, none of which were in any way comparable. The fibre stresses assigned to the wood and the methods of classifying the poles into size groups were all quite different. This caused much confusion and expense in the supply yards of the pole producers, poles being the bulky, unwieldly things they are.

37 Committee Members

The sectional committee appointed for the project was composed of 37 members, representing 22 organizations. Included were numerous associations of producers and users of poles, rather complete representation from the electric and steam railways, the telephone and telegraph systems, the electric power companies, and the miscellaneous consumers represented by the National Association of Purchasing Agents. The general interest groups, including the Federal and State government, were also well represented. Now, more than 25 years later, the committee still has 37 members, indicating the adequacy of representation of all the branches of industry concerned.

The Sectional Committee on Wood Poles, O5, carried on its work by means of a suitable group of subcommittees. After much deliberation, standards covering the ultimate fibre stresses for the four species of wood poles under consideration, as well as specifications and dimensions, were submitted for approval as American Standard. They were approved in 1931. The main difficulty which had confronted the committee was the problem of standard fibre stresses, but as soon as agreement was reached on the stresses the committee was able to prepare the dimension tables without much trouble. More than 60,000 copies of these four pamphlets were distributed.

In 1933, American Standard specifications and dimensions for two additional types of poles were approved.

In 1941, all six standards were reviewed and reapproved without change.

In 1945, upon the request of the Office of Price Administration, a war project on wood poles was initiated. Because of the extraordinarily heavy use of timber in the war effort, the species of poles covered by the American Standards had become difficult, if not impossible, to obtain, and it was necessary to give consideration to the use of poles of the less durable species. Fourteen such species were finally included. The American War Standard was approved on November 30, 1945, the whole job taking less than four months.

Following the termination of the war, the peacetime O5 committee, was reorganized and began work on a revision of the American Standards. This led to the approval of a single standard in April 1948, which included all of the types of wood cov-

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"Here is $10,000 worth of research available to you for 75 cents," Henry Lamb said in demonstrating the principle of "critical speed." A heavier spindle carrying a small wheel can have a longer shaft and hence a deeper bite into the work than a spindle of smaller diameter with a larger wheel which must fit more deeply into the tool chuck to prevent it from whipping, bending, or snapping at high speed.

Photo by Gene Dauber

Recognition for an American Standard

by Henry G. Lamb
Safety Engineer, ASA

IN the case of the American Standard Safety Code for the Use, Care, and Protection of Abrasive Wheels, the procedure of the American Standards Association enabled a trade association to gain recognition for a standard it had developed.

The Grinding Wheel Manufacturers Association of the United States and Canada believed that it had a moral responsibility to help prevent injuries to workmen from the breaking or exploding of abrasive wheels. Even during the first World War, these injuries were far too frequent, the association believed. As far back as May, 1919, it had published the third edition of its own Safety Code for the Use, Care, and Protection of Abrasive Wheels.

At about that same time, 14 states had either legislative acts or commission orders regulating the use of abrasive wheels. No two of these regulations were alike. At this same period, the Workmen's Compensation insurance rates were partially modified by so-called "schedule rating," whereby if a company provided certain guards on its machines it received a lower insurance rate. These schedule rating provisions for abrasive wheels again were different from the state regulations.

Benefits of Uniformity

In order to promote sound requirements in the various states and to obtain uniformity so a manufacturer could make one machine and sell it without changing it for each state, the Grinding Wheel Manufacturers Association suggested to the various states that they adopt the code prepared by the association. The governmental groups, however, took the attitude that this code could not be sound or right because it was produced, and was being promoted, by an association of manufacturers.

When the Grinding Wheel Manufacturers Association learned of the safety code work being done by the American Standards Association, it requested the initiation of a project. The association not only offered its services as a sponsor for this project, but also offered its own code as a starting point in the development of an American Standard.

The project was initiated with the International Association of Industrial Accident Boards and Commissions serving as joint sponsor with the Grinding Wheel Manufacturers Association. The first American Standard developed by this sectional committee and approved by the ASA in 1922 was almost identical with the code which had been prepared by the trade association. The code as an American Standard immediately gained recognition among the state regulatory bodies and insurance companies, and is now the basis of the regulations in practically all of the states.

What made this possible?

(1) The American Standard was developed under neutral auspices.

(2) The procedure brought the regulatory bodies into contact with the manufacturers, users, and technical experts.

(3) The sectional committee procedure served to convince the regulatory bodies that this code was soundly conceived from a technical viewpoint.

(4) Through the consensus principle the regulatory bodies were convinced that they could adopt this code as the basis

(*Continued on page* 132)

Committee Method Pays Dividends

by John Gaillard

Mechanical Engineer, ASA

ABOUT two weeks ago the ASA approved a new American Standard, Gray Finishes for Industrial Apparatus and Equipment. This standard, developed by the sectional committee method, presents four gray colors designated as Light, Medium Light, Medium Dark, and Dark. If you want your industrial equipment finished in gray, the new American Standard recommends that, in writing your specification, you select one or more of these four colors.

Each color is designated not only by a name, but also by a number, such as 49 for Light Gray, and 23 for Dark Gray. The number is an indication of the relative lightness or darkness of the gray color, or in other words, its position somewhere between white and black. Each color is expressed in terms of measurement by a formula, the so-called Munsell notation. Such notations may serve as the basis for preparation of color chips representing the four American Standard grays to be used in practice as a guide in producing or comparing gray finishes. You may wire the Munsell notation to a manufacturer of equipment on the West Coast and he will be able to determine in just what gray color you want your equipment finished.

Solves a Problem

The new American Standard solves a serious problem that has been bothering manufacturers and users of industrial equipment for many years. In the absence of a general standard for gray finishes, each purchaser of equipment would specify his own, which led to a great variety. In many cases the purchaser's idea was to get a uniform appearance of an installation in his plant composed of equipment and apparatus made by different suppliers. More than 20 years ago the National Machine Tool Builders Association came to the conclusion that a manufacturer organizing a machine shop would prefer to have the lathes, milling machines, drill presses, and other machine tools supplied by various machine tool builders match in color. Therefore, the machine tool builders adopted a "machine tool gray." This was a rather dark color which they changed for technical reasons, about ten years ago, to a lighter "machine tool gray 7B." This color is practically identical with the new American Standard Medium Light Gray.

Excessive Variety

Other industries had similar difficulties. The electrical manufacturers, who supply their equipment, apparatus, and instruments to many branches of industry, had to cope with the demand for an excessive variety of gray finishes. One electrical manufacturer had to finish the same kind of equipment in more than 40 different gray colors in the course of a single year, to meet the wishes of his customers. This company and others found that each of them was using more than 100 gray finishes altogether. Refinishing of apparatus and equipment, either by the supplier before delivery to the purchaser, or by the purchaser after the equipment had been installed in his plant, was a common occurrence involving great waste of time and money in many quarters.

Some users of equipment wanted it finished in more than one gray color. This raised the additional problem of getting harmonious contrasts. Different shades of gray do not necessarily give pleasant effects when combined. The four American Standard grays have been chosen so as to harmonize when used, for example, in "two-tone" finishes preferred by some companies for their equipment.

There is more to gray finishes than just appearance. During the war, the Navy found that the gray finish of equipment in control rooms aboard ships was an important factor in the ease and speed of vision, or visual acuity, and hence, in the effectiveness with which the control equipment was operated. Asked by the Navy for advice, some of the large electrical manufacturers made a study of the problem and experts from General Electric and Westinghouse jointly developed a proposal of four gray finishes somewhat along the same lines as the new series of American Standard grays. The National Electrical Manufacturers Association realized that this proposal was of interest not only to its own membership, but to many other branches of industry as well. This led to a discussion of the problem in the Company Member Conference of the ASA and this group asked that the matter be taken up under ASA procedure. As a result, the sectional committee on Colors for Industrial Apparatus and Equipment was organized. More than forty organizations were invited to take an active part in developing the project. The sectional committee on Colors for Industrial Apparatus and Equipment organized in 1947 has 20 members, mostly representatives of industry and the Government, and some professional color specialists. The committee adopted the proposal of the electrical manufacturers as a working basis, but in the course of its discussions amended it in some respects, mostly to meet the wishes of cooperating groups. For example, the Light Gray originally proposed by the electrical manufacturers was shifted from the yellow toward the green, to get a shade of gray in agreement with the telephone industry's practice. The original Medium Light was changed so as to become practically identical with the "machine tool gray 7B." This is now the American Standard Gray No. 49.

The sectional committee prepared four drafts and, when it had reached

(*Continued on page* 127)

From Association Into "American Standard"

by H. M. Lawrence

Materials Engineer, ASA

TRADE and technical groups may find the existing standards method—one of several recognized by ASA procedure—appropriate for obtaining approval as American Standard of standards developed at the association level. A total of 210 American Standards have been approved under this method. Of these, 180 have been standards of the American Society for Testing Materials, including a wide variety of methods of test and specifications for ferrous and nonferrous materials; building materials, both structural and decorative; and soaps and detergents, among others.

In sending these to ASA, the ASTM furnishes information that indicates the acceptability of the standard to groups concerned with the particular material in question, including analysis of the membership of the committee that developed the standard; the history and extent of use of the standard itself; and the relation of the standard to any others in its field. If examination by ASA indicates that all interested groups have concurred with the standard, ASA approval is accorded. ASA approval is based upon a determination that the standard is acceptable to the groups concerned, rather than solely on a study of the technical content of the standard itself. Study of the technical content is primarily to prevent conflict with provisions in other American Standards.

This method was followed by the National Conference on Street and Highway Safety, the Institute of Traffic Engineers, and the American Association of State Highway Officials in obtaining approval as American Standard of the latest edition of the Manual on Uniform Traffic Control Devices for Streets and Highways (D6.1-1948)—a document whose provisions are gradually reducing the wide variety of such devices that have grown up in many states.

Standards covering the selection and installation of interior marble and Indiana limestone were accorded approval as American Standards in 1948, following submittal by the Marble Institute of America and the Indiana Limestone Institute, respectively. These standards are not, per se, specifications for the materials themselves, and thus primarily of interest to producers, but rather are of special concern to architects, providing them with a convenient method by which they can assure themselves that the contractor properly selects and installs these materials. All an architect needs to do is to require the contractor to follow the provisions in these standards.

Photo by Gene Dauber

Cyril Ainsworth, ASA Technical Director, uses chart to show increase in number of American Standards from 111 in 1928 to 1121 in 1949.

Standard for Bushes

Another of these standards covers nursery stock, that is bushes, shrubs, trees, vines, etc that are produced and sold by nurserymen, either for their decorative or fruit-producing qualities. Sent to ASA by the American Association of Nurserymen, this standard tells how long the roots and branches should be for different grades of shrubs and trees. This standard has been used by large buyers of nursery stock for a long time. Approval as American Standard brings other groups into the picture. Next time you buy fruit trees or shrubs for your homes, you, too, can check them with this American Standard and see whether you are getting the type you want. A letter from the New York State Department of Public Works comments on their experience as follows: "Having lived through the experience of assigning one man to write specifications for plants for two whole years, I am enthusiastic about the possibility of using standards . . . to minimize specification writing on public works programs."

Although the great majority of standards submitted to ASA meet American Standard requirements and are approved without delay, approval is by no means automatic. There are a number of cases on record where

the ASA has found that a standard has been inacceptable to an important group in the field for one reason or another. In those cases, the sponsor organization has either cleared the situation and resubmitted the standard, or approval has been withheld entirely.

Some years ago, for example, the trade group for mohair pile fabrics requested approval for a Commercial Standard for these materials. Investigation established that some industrial as well as some ultimate consumer users were not satisfied with the standard, so ASA approval was not given. Similarly, a standard submitted by the Painting and Decorating Contractors of America was found inacceptable to certain groups.

Sometimes, investigation by ASA of standards submitted for approval under the existing standards method has led to modifications in the standards that have made them more acceptable. This has happened in the case of two ASTM standards. In the first case, the Society submitted its Specifications for Structural Steel for Locomotives and Cars (ASTM A 113) in 1936. Investigation brought out that some interests, more particularly manufacturers of electric locomotives, were not entirely satisfied with certain requirements in the specifications. Subsequently, following further consideration by ASTM Committee A-1 on Steel, a revised standard was submitted and approved as American Standard in 1942. Similarly, certain questions were raised with respect to the ASTM Specifications for Calcined Gypsum for Dental Plasters (ASTM C 72) by some manufacturers of dental plasters; later, following study by ASTM Committee C-11 on Gypsum, a revised edition of this ASTM standard was submitted and approved in 1941.

Increases Acceptance

Many interested in standardization work have remarked that the existing standards method offers advantages in obtaining that increased acceptance accorded to American Standards by governmental, public, and quasi-public bodies.

The existing standards method, where its use is appropriate, is commended to association executives as a convenient method for obtaining approval as American Standard of standards developed entirely or largely within the framework of a single organization.

Open House

(*Continued from page* 118)

ganization performs its functions.

In carrying on the operations, the work of the technical staff must be serviced. The office services—mail room, typing, duplicating, files, switchboard, receptionist and office purchasing—are directly under the supervision of the office manager. American Standards must be sold, and distributed to members. This service is handled by the sales department. The librarian collects and makes available to ASA members the standards, specifications, and related documents representing the work being done on standards not only in this country but throughout the world.

Every organization needs facilities for making its product and itself better known. In the ASA, Admiral Hussey explained, this is taken care of through the department on membership services and promotion, and through the magazine, STANDARDIZATION. Since there is no staff member exclusively responsible for publicity, the promotion department and the magazine staff share responsibility for press relations and services. Publication of standards and editorial services to committees is also centered in the editorial department.

"The staff must be a service group that is just the right mixture of engineer, public relations expert, and salesman," C. E. Hilton, staff engineer and secretary to the Committee on Procedure, explained in talking about what the technical staff does and why it is needed. "Each of us must constantly keep in mind that our enthusiasm in any particular direction must be tempered with the right degree of unbiased detachment. This must apply, we believe, both to work undertaken within our Federation structure and by outside organizations. Otherwise, how can we fulfill our function as the national clearinghouse for voluntary standards?"

The responsibility of the staff takes several forms, Mr Hilton explained — Information; Procedure Education; Secretarial; and Promotion. Ringing phones, stacks of mail, and a steady flow of visitors bear out the fact that ASA is a natural source from which one would expect to obtain information on standards. In carrying out the "procedure education" responsibility, constant emphasis must be given to the voluntary nature of American Standards, and the procedure by which they are developed.

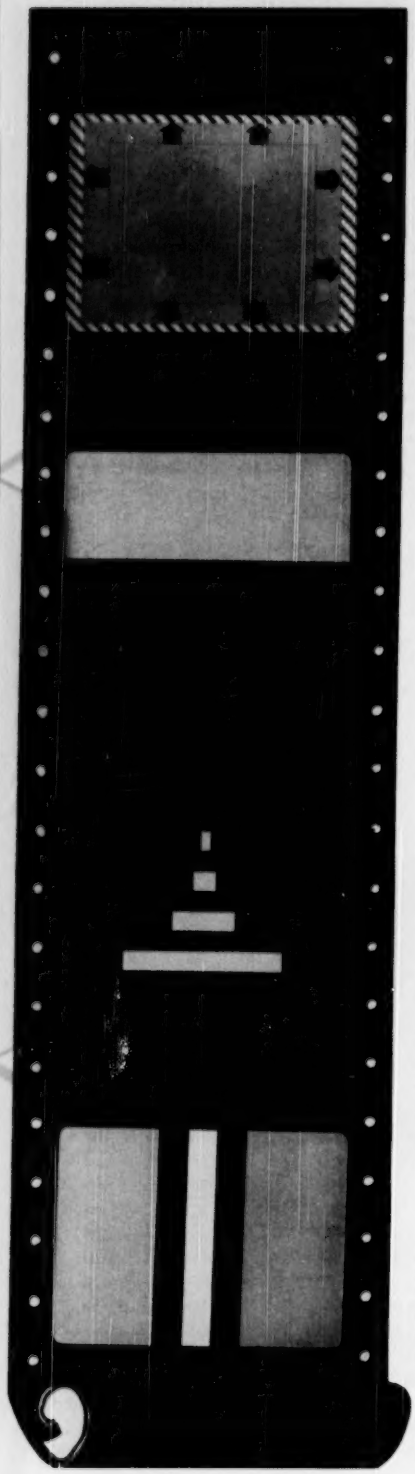
A member of the staff serves as secretary of each of the ten correlating committees, as well as the Committee on Procedure and Board of Review. Each is also secretary for several sectional committees. Calls for meetings, minutes, letter ballots, up-to-date personnels, and editorial guidance are just a few of the services that must be provided.

International Work

The technical staff is also responsible for channeling new international proposals or reports to the proper groups in this country.

Cooperation with the editorial, sales, and promotion departments is also essential if the existence of standards is to be made known. Press releases, articles, and sales literature are all dependent on the technical staff for factual data.

T. D. Jolly, vice-president of the Aluminum Company of America, and president of the ASA, closed the meeting by emphasizing the responsibility of the members. To safeguard the voluntary nature of American Standards, all the information about their development must be made available to the groups concerned, he explained. As in any democratic process, the work involved in checking the facts of any case before the organization is an essential part of the machinery.



Television—On the

THE poor results you sometimes notice when film is broadcast over your television set will be considerably improved if broadcasters take advantage of a new test film recently released by the Society of Motion Picture and Television Engineers. This is the first time that technicians in a broadcast studio can use recognized tests to check whether or not their film equipment is "on the target" and in best adjustment. Use of the test film will help to eliminate from film programs much of the annoying edge flare so often found in film transmissions, and will also improve the detail and tonal rendition, eliminating washed out whites and extreme blacks from the film program material. The Society points out, however, that the quality of the reception in your own living room may depend largely on the adjustment of your home receiver.

The film is the work of the Television Committee of the SMPTE which has been working for some time on detailed information to help in the production and use of films for television broadcasting. First, the committee compiled a report on "Films in Television" giving its analysis of what constitutes good practice in the production of films for use on television programs. Second, it provided the television broadcasters with a test film as a guide in adjusting their film camera chains to best reproduce these films. Dr R. L. Garman of General Precision Laboratories was chairman of the subcommittee which approved the test film for release in September 1949.

Standard "Targets"

The film provides standard "targets" which the television operator in the studio can run through his projector. If the "target" film is reproduced accurately and clearly, the operator can be sure his equipment is aligned properly for clear transmission to your home. If not, he can adjust it to correct the inaccuracy. Alignment, ability to reproduce shades of gray, storage of the electrical image to permit the entire image to be scanned properly, control of brightness, and response of the television system to low frequency and to medium frequency are the points checked by the film. Use of the film will help the operator of a new station in setting up his equipment for the first time, as well as make it possible for him to check its "drift" from best adjustment. Each separate section can be run again and again or continuously as need be until each problem is under control. The film is not a laboratory instrument but is intended for regular use to check equipment in regular commercial operation.

Two Test Sizes Available

The complete film, available in either 16 or 35-mm widths, is made up of seven test sections and a selection of scenes. The test sections are a series of geometrical patterns, each one selecting some particular failing of the average television system. A variety of scenes typical of those which the telecaster is daily called upon to reproduce are included as a final check of the overall adjustment.

(Figures one to four illustrated on this page; figures five to eight on page 125).

Figure 1
Alignment—

The motion picture projector can be accurately aligned with the television camera by checking with this diagram. It shows the part of the projected film frame which is to be reproduced by the television system. The lines connecting the arrow shanks enclose the area that is reasonably well reproduced on most home receivers.

Figure 2
Low Frequence Response—

This test is made in two parts,

each consisting of a half-black-half-white frame, with the dividing line horizontal. The first section has the black portion at the top of the frame and the second is black at the bottom. These charts produced 60-cycle square wave signals. Serious tilting or bowing of the squares indicates incorrect low frequency phase and amplitude response.

Figure 3

Medium Frequency Response—

The response of the television system to medium frequency signals is of importance to picture quality. Horizontal bars are used in this test, first as black on white and then reversed. The bars have lengths equal in time of scanning beam travel to 2, 5, 12½, and 32 microseconds. These correspond to half wave pulses covering an approximate fundamental frequency range from 15 to 250 kilocycles. Correct medium frequency phase and amplitude response will be indicated by leading and trailing edges of the bars when viewed on the television monitor.

Figure 4

Storage—

Present-day film pickup systems utilize short pulses of light which must be stored long enough to permit the charged image to be scanned. Since the beam starts the scanning process at the top of the picture, the storage time required is maximum at the bottom of the picture. Some pickup tubes will suffer from leakage to the extent that the charged image may be seriously reduced in amplitude by the time the beam reaches the bottom of the picture. The chart which checks this is made up of vertical black and white stripes on a gray background. When viewed on the wave-form monitor (set at field rate) this pattern will produce three lines representing white, gray, and black. Shading should be set to hold the gray line parallel with the blanking axis. If the white and black lines now tend to converge, the pickup tube does not have ideal storage.

Figure 5

Transfer Characteristics—

The ability of a television system to reproduce shades of gray is indicated in this section through the use of step-density areas. The first chart consists of a white area and a black area that serve as limit references, along with a centrally placed window in which the density steps appear.

Figure 6

Automatic Brightness Control—

This test indicates the ability of the television system to follow changes in average illumination of a series of scenes. It consists of a white disc centered in a black frame which enlarges slowly to fill the whole frame. As the white portion becomes larger, the automatic brightness control should hold the black level constant.

Figure 7

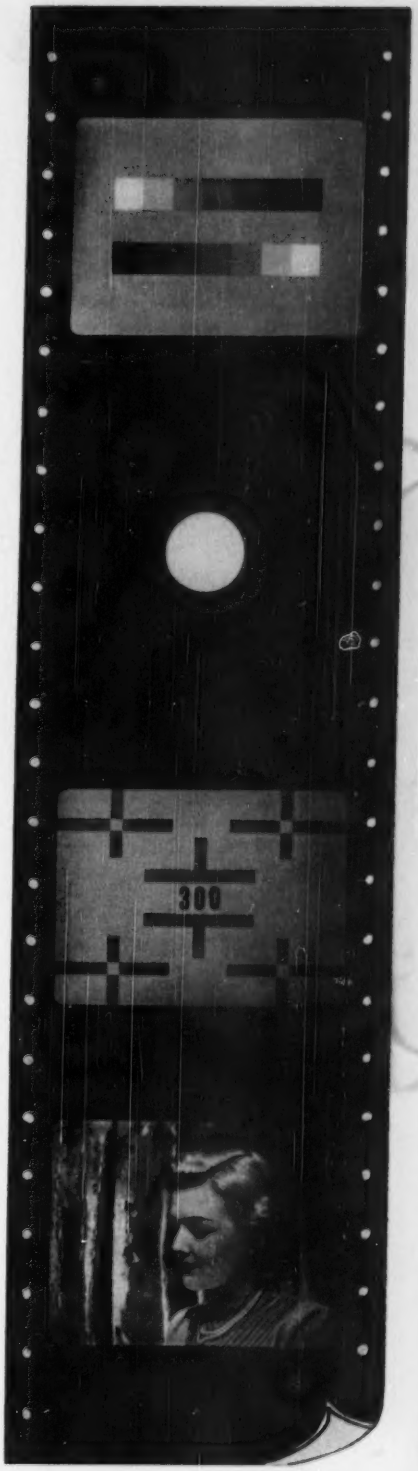
Resolution—

Each of the five charts in this section is carefully calibrated in television lines to indicate the capability of the system to reproduce fine detail. Starting at 200 lines, the charts change at five-second intervals until 600-line pattern appears.

Figure 8

Typical Scenes—

To provide a qualitative check on the over-all results to be expected from good film, several scenes taken from material used specifically for television are included in the test reel.



Standards From Other Countries

MEMBERS of the American Standards Association may borrow from the ASA Library copies of any of the following standards recently received from other countries. Orders may also be sent to the country of origin through the ASA office. The titles of the standards are given here in English, but the documents themselves are in the language of the country from which they were received.

For the convenience of our readers, the standards are listed under their general UDC classifications.

615 Pharmacy

Poland

Sixteen Standards for Various Surgical Instruments and Tools Such as Scalpels, Needles, Chisels, etc, PN Z-54014 through 54017; 54020; 54022; 54023; 54088; 57511 through 57514; 57520 through 57523; 58523

Two Kinds of Serrations (Ribbing) for Surgical Instruments, PN Z-54093

Various Forms of Surgical Tweezers, PN Z-54097/8

Union of South Africa

Specification for Disinfectants, SABS 47-1949

Safety Code for Medical Use of X-Rays and Radium, SABS 07-1949

621-78 Devices for Protection of Staff and of the Public

Rumania

Danger Sign for High-Voltage Lines, STAS 297-49

621.1 Steam. Steam Engines. Boilers

Belgium

Code of Good Practice for Construction of Pressure Vessels, NBN 121-1949

France

Width of Piston Rings and of Their Grooves (in railway steam locomotives), PN F 20-026

Tachometer's Drive (in railway steam locomotives), PN F 24-001

Germany

Metric Screw Threads Used in Locomotive Construction, DIN 30280

Rumania

Fuse Plug for Locomotives, STAS 111

Locomotive Fire Box Stay Bolts, Various Types, STAS 159; 160; 161

625.08 Machinery for Road Constructions

France

Coupling Device for Compressing Roller and Digger, NF E 58-024

625.2 Railway Rolling Stock

France

Railroad Car Frames, Tolerances, NF F 33-002

Dimensional Tolerances Permissible in Car Frame Construction, NF F 33-002

629.11 Land Vehicles. Transport Engineering

Belgium

Agricultural Vehicles, NBN 215-1949

France

Bicycle Handlebar (Revised), R 341-01

Bicycle Free-Wheel Sprocket (Revised), R 324-02

Round Dashboard Instruments (Revised), R 142-06

Sprocket Wheel (Revised), R 324-03

Crank Lever With Three-Point Attachment, R 321-11

Sprocket Wheel for Crank Lever With Three-Point Attachment, R 324-05

Crank Lever With Five-Point Attachment, R 321-12

Sprocket Wheel for Crank Lever With Five-Point Attachment, R 324-06

Woodruff Key, R 941-04

Spark Plug Socket Wrench, R 613-30

Spain

Knob for Gear-Shift Lever, UNE 26002

Flanges of Transmission Box, UNE 26003

Automobile Distributor, 27 mm Model, UNE 10001

Adjustable Generator Mounting Flanges, UNE 10002

Ball Studs, UNE 26004

Disk Wheels, UNE 26005

Gear Shift Lever Positions, UNE 26006

Bumpers for Buses and Trucks, UNE 26007

Bumpers for Passenger Cars, UNE 26008

Method of Mounting Headlamps, UNE 26010

Automobile Batteries, UNE 26012

629.12 Ships and Shipbuilding

France

Marine Hardware. Double Spring Hinges, NF J 36-193

Curtain Rods, NF J 36-332/3

Door Spring Latch, Flush Type, NF J 36-451

Partition Latches, NF J 36-482

Rumania

Anchors—Navy Type, Fishing Boat Type, STAS 594, 597

Spain

Cable Guide Rollers, UNE 27009

Bitts, UNE 27010

Cleats, UNE 27011

635 Horticulture. Kitchen and Ornamental Gardens

Rumania

Vegetable Seeds: String Beans and Peas, STAS 262-49

637 Domestic Animal Produce

Rumania

Butter of Cow's Milk, General Specifications, STAS 278

Cheese, Swiss Type, Method of Analysis, STAS 281

Butter, Definition, STAS 278-49

Butter, Method of Analysis, STAS 279-49

Cheese, Swiss Type, STAS 280-49

661 Chemical Products

Poland

Chemical Products, Such as Sodium, Phosphate, Sodium Nitrate, Technical Sulfur, Potassium, Chloride, etc, PN C-84021, 84022, 84030, 84031, 86001, 86004

Rumania

Acetic Acid, Pure, STAS 267-49

Copper Sulfate, Industrial, STAS 341-49

Silicon Carbide, Raw, STAS 343-49

Minium, STAS 429-49

Nitric Acid, Industrial, STAS 447-49

Hydrochloric Acid, Industrial, STAS 339

Sodium Sulfate, STAS 340

Aluminum Sulfate, Industrial, STAS 342

Ammonium Chloride, STAS 449

Ammonium Nitrate, STAS 450

Litharge Used for Pigment, STAS 100

Zinc Oxide, Ammonium Technical, STAS 421; 448

Union of South Africa

Specification for Technical Ether, SABS 85-1949

662 Pyrotechnics. Explosive Materials. Combustibles

Poland

Nitroglycerine, PN C-86005

Rumania

"Astralite" (Explosive), STAS 498

Special Coals, Coal Brickets, etc, from the Mines of Jiuliu Valley, STAS 300; 302; 303; 396; 397; 398; 561

664 Preparation and Preservation of Solid Foodstuffs

Union of South Africa

Specification for Canned Vienna Style Sausages (Canned Frankfurter Style Sausages), SABS 212-1949

Specification for Canned Pork Luncheon Roll, SABS 213-1949

Specification for Canned Oxford Sausages, SABS 207-1949

Specification for Canned Cambridge Sausages, SABS 208-1949

Specification for Canned Pork Sausages and Canned Chipolata Cocktail Sausages, SABS 209-1949

Specification for Canned Pork and Beef Luncheon Roll, SABS 214-1949

665 Oils. Fats. Waxes

The Netherlands

Petroleum Products. Determination of Cloud- and Pour-Points, N 943

Poland

Castor Oil, PN C-24007

Axle Grease, PN C-96097

Solid Grease, PN C-96130

Benzene, Industrial, PN C-97002

Petroleum Products. Various Tests of Gasoline and Fuel-Oil. Specifications for Gasoline and Motor Oils, PN C-04028; 04037; 04038; 04043; 04090; 04093; 96025; 96038; 96085

Rumania

Petroleum Products. Determination of Bromine Number, STAS 311-49

Vegetable Oils, Method of Analysis, STAS 145

Industrial Benzene, STAS 310

Various Grades of Mineral Oils, STAS 383-387

Standard Benzene, STAS 423

667.6/.8 Paints. Varnishes. Lacquer. Polishing Materials

France

Ocher, Pigment, NF T 31-002

The Netherlands

Black Paint Paste in Linseed Oil. Test Methods (Revised) N 682

Poland

Ultramarine, PN C-81012

Spain

Test Methods for Solvents of Cellulose Varnishes and Lacquers, UNE 7012

668.1 Soaps. Soap Industry

Rumania

Toilet Soap, STAS 191, 192

669 Metallurgy

Belgium

Round Bars (Rolled) for Reinforced Concrete, NBN 179-1949

India

Specification for Cast Aluminum for Utensils, IS:20-1950
Specification for Wrought Aluminum for Utensils, IS:21-1950
Specification for 98 Percent Aluminum Notched Bars and Ingots for Remelting Purposes, IS:22-1950
Specification for 99 Percent Aluminum Notched Bars and Ingots for Remelting for Aircraft Purposes, IS:23-1950
Specification for Brazing Solder, IS:24-1950
Specification for Antifriction Bearing Alloys, IS:25-1950
Specification for Tin Ingots, IS:26-1950
Specifications for Pig Lead, IS:27-1950

Poland

Chemical Analysis of Steel and Iron, PN H-04023
Rockwell Hardness Test, PN H-04355
Zinc and Zinc Alloy, Type "ZNAL", PN H-82200; 87101
Copper Strips and Bars, Cold Rolled, PN H-92711; 92810; 92825
Hexagonal Steel Bars, PN H-93204
Breaking Test of Metals, PN H-04370
Carbon Steel Plates, Specifications, PN H-92120
Cold-Rolled Copper Plates, Dimensions, PN H-92710
Brass Plates, Dimensions, PN H-92730

Rumania

Brazing Alloy, Wires and Bars, STAS 294
Hot-Rolled Sections — Angle, Tee and Channel, STAS 425; 564; 566
Sheets and Strips of Copper and Aluminum, STAS 426; 427; 428
Steel Plates, Hot-Rolled, STAS 436; 437
Zinc Sheets, STAS 488
Strips, Sheets, Plates of Lead, STAS 489; 490; 491
Vickers Hardness Test, STAS 493
Copper, Electrolytis, STAS 642
Bend Test of Metals, STAS 777

672 Articles of Iron and Steel

France

Liquid Soap Dispensing Can Used in Railway Carriages, NF F 31-001
Cloth and Hat Peg Used in Railroad Carriages, NF F 31-007
Metal Container for Food Preserves, NF H 33-002

The Netherlands

Studless Chains, N 951

Rumania

Anchor Chains, STAS 168-49
Bolt-Type Joining Shackles, STAS 170, 172
Metal Hand-Tray for Minerals, STAS 317
Special Cap for Extracting Pipes, STAS 216

673 Articles of Various Metals Other than Iron and Steel

France

Curtain Ring, Open Type, Used in Marine Equipment, NF J 36-331
Spring Latch Used in Marine Equipment, NF J 36-399

Union of South Africa

Specification for Electroplated Nickel Silver Articles for Domestic and Hotel Use, SABS 96-1949

674 Wood Industry

Poland

Classification of Lumber, PN B-02000

Rumania

Parquet Flooring, STAS 228-49
Special Types of Wooden Ties for Railroad Tracks, STAS 331-49
Determination of Shrinkage and Swelling of Wood, STAS 85
Wood; Compression Test Parallel to Fibers, STAS 86
Wooden Boxes for Pastry, STAS 152
Mining Timber, STAS 256
Wooden Logs for Cellulose and Pulp Purposes, STAS 259
Wooden Poles for Overhead Electric Lines, STAS 257-49
Wooden Ties for Normal Gage Railroad, STAS 330-49
Wooden Ties for Narrow-Gage Railroads, STAS 332-49

Union of South Africa

Specification for Grade "A" Wooden Boxes for Citrus Fruit, SABS 60-1949

676 Paper Industry

Poland

Cigarette Cardboard Boxes, Bags, etc, PN P-79000 through 79005

Rumania

Different Kinds of Paper for Printing and Pressboard for Packing Boxes, STAS 494; 653; 732; 733
Kraft Paper Bags, Sulphate Type, STAS 87
Paper and Cardboard, Method of Test STAS 106
Asphalt Impregnated Cellulose Cardboard, STAS 137
Vellum and Semi-Vellum, STAS 399; 400; 401

678 Rubber Industry

Rumania

Rubber Protective Sleeve for Drilling Rods, STAS 205

686.8 Office Necessities. School Necessities

Rumania

Office Desks, Dimensions, STAS 148-49
Typewriter Desks, Types and Dimensions, STAS 149-49
Knee-Hole Desks, Types A and B, STAS 147

69 Building Industry

Austria

Doors and Windows, Technical Specifications, ÖNORM B2225
Magnesium Oxychloride Flooring Called "Steinholtz" (Ironwood), ÖNORM B3450
Heating and Heat Protection in Buildings, ÖNORM B8110

Belgium

Modular System, Height Between Floors, NBN 217-1949

The Netherlands

Concrete Flooring Tiles, Test Requirements and Testing; Methods (Revised) N 501/2
Basic Technical Rules for Building Regulations, N 1055

691 Building Materials

Poland

Composition Wallboards, PN B-491
Brick Masonry, PN B-162

Spain

Determination of Apparent Density of Cement Flagstones and Paving Tiles, UNE 7007
Determination of Water Absorption by Cement Flagstones and Paving Tiles, UNE 7008

Union of South Africa

Specification for Gypsum Blocks, SABS 52-1949

695 Roofing Materials

Rumania

Asphalt Impregnated Pasteboard, STAS 138-49

Standards Received from Australia

Volumetric Glassware Code, CR.1-1949
Oil-base Wood Priming Paint, INT 10A-1949
Oil-base Undercoating Paint, INT 11A-1949
Kalsomine, INT 56-1949
Aluminum Pigmented Wood Primer, INT 57-1949
Concrete Interlocking Roofing Tiles, INT 310-1949

Committee Method

(*Continued from page* 121)

agreement on the last one, sent this out to canvass interested parties. Also, to visualize the proposed four grays, several hundred sets of color chips were distributed. Industry gave the proposal a very favorable reception. Some companies adopted the four grays even before the American Standard had been approved. Other companies, which had a standard of their own, announced that they were waiting only for ASA approval to change to the American Standard.

Here, then, is a typical case where a problem that arose in several branches of industry, causing serious trouble during many years to manufacturers and users of industrial equipment was eliminated effectively through cooperation of the interested parties in a forum provided by the ASA—the sectional committee.

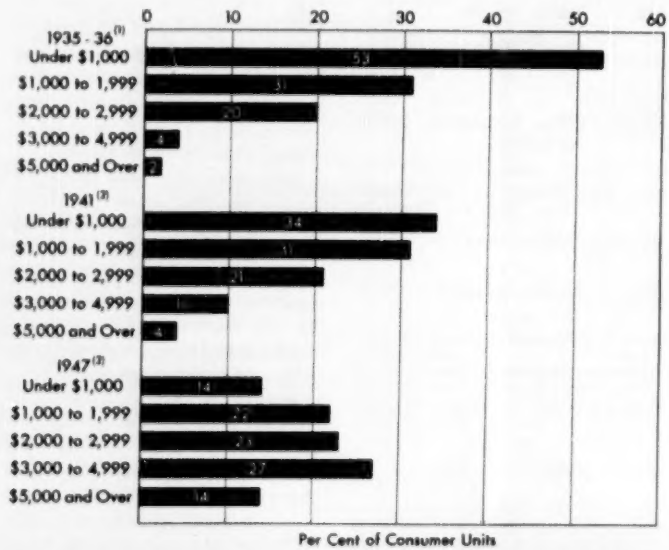
It may be held that the establishment of harmonious relations between colors, be it through their matching on a unified basis, or through harmonious blending of different shades, is symbolic of the very principles and procedures by which the ASA is giving service to industry.

Standards and Labels for Consumer's Goods

Standards and Labels for Consumer's Goods. Jessie V. Coles. (The Ronald Press Company, 15 East 26th Street, New York, N. Y., 556 pp, $5.00) Reviewed by Irwin D. Wolf, Vice-President, Kaufmann Department Stores, Pittsburgh; member, and formerly chairman, of the Consumer Goods Committee of the American Standards Association, representing the National Retail Dry Goods Association.

THIS volume by Dr Jessie V. Coles is a significant and important contribution to the whole problem of standards and labeling of consumer goods. Coming as it does when American production and distribution are finally overcoming the impact of World War II, this book is virtually a "must" in the library of any executive or technician interested in consumer goods standards, quality control, labeling, and sales promotion.

The author has supplied within this volume an excellent list of recognized trade standards for foods, household equipment, clothing and household textiles, electrical goods, and drugs and cosmetics, with much detail as to their development and promulgation. The types of labels used both in grade labels and in informative labeling are also illustrated and afford the laboratory technologist and the sales promotion executive ample opportunity to weigh his own company's method of merchandise fact presentation against both good and bad types in fields similar to his own.



Distribution of consumer units in five income classes, 1935-36, 1941, and 1947

Dr Coles has prepared as thorough and conscientious an account of the development of and need for standards for consumer goods and their importance in production, distribution, and consumption as this reviewer has seen. There should be no confusion in anyone's mind between the intelligent democratic use of standards and the limitation of varieties by regimentation.

The problems of labeling of consumer goods are dealt with at considerable length. Of necessity the viewpoint of the consumer has been emphasized in these chapters, and possibly producer opposition to grade labeling has been painted in too dark colors. It is difficult to visualize the complexities and to estimate the expenses to be faced by a company or an industry if labeling by grade or with actual test data are to be policed by the necessary spot checking by laboratory procedures under quality control. This particular phase of the problem has not been covered in detail in this volume. The production industry is fearful, too, of mandatory regulations on grade labeling or mandatory standards on "the general principle . . . that standards should be mandatory when they are necessary to protect the welfare of consumers" because *welfare* is such an abstract term capable of "octapusabilities" in final use. There is no question but that standards and full identification should be mandatory when health and safety are involved.

One other factor which seems to have been overlooked is that many distributors and producers believe that the retail customer will require far more training and education than she will wish to take in order to become an informed consumer of all types of goods when these standards and labels are fully utilized in goods at the consumer purchasing level.

(*Continued on page* 134)

AMERICAN STANDARDS

Status as of April 14, 1950

Legend

Standards Council—Approval by Standards Council is final approval as American Standard; usually requires 4 weeks

Board of Review—Acts for Standards Council, gives final approval as American Standard; usually requires 2 weeks

Correlating Committees—Approve standards to send to Standards Council or Board of Review for final action; approval by correlating committee usually takes 4 weeks

Building

American Standards Approved—

Structural Clay Load-Bearing Wall Tile, ASTM C34-49; ASA A74.1-1950 (Revision of ASTM C34-41; ASA A74.1-1942)

Structural Clay Non-Load-Bearing Tile, ASTM C56-49; ASA A76.1-1950 (Revision of ASTM C56-41; ASA A76.1-1942)

Structural Clay Floor Tile, ASTM C57-1949; ASA A77.1-1950 (Revision of ASTM C57-1939; ASA A77.1-1942)

Sponsor: American Society for Testing Materials

Places of Outdoor Assembly, Grandstands and Tents, Z20.3-1950 (Revision of Z20.1-1941 and Z20.2-1949)

Sponsors: National Fire Protection Association; Building Officials Conference of America

In Standards Council—

Specifications for Portland Cement (ASTM C 150-49; ASA A1.1)

Specifications for Air-Entraining Portland Cement (ASTM C 175-48T; ASA A1.16)

Specifications for Masonry Cement (ASTM C 91-49; Revision of ASA A1.3-1948)

Methods of Test for Compressive Strength of Hydraulic Cement Mortars (ASTM C 109-49; Revision of ASA A1.4-1948)

Methods of Chemical Analysis of Portland Cement (ASTM C 114-48T; Revision of ASA A1.6-1948)

Methods of Test for Autoclave Expansion of Portland Cement (ASTM C 151-49; Revision of ASA A1.8-1948)

Methods of Test for Air Content of Portland Cement Mortar (ASTM C 185-49T; Revision of ASA A1.9-1948)

Methods of Test for Heat of Hydration of Portland Cement (ASTM C 186-49; Revision of ASA A1.10-1948)

Method of Test for Normal Consistency of Hydraulic Cement (ASTM C 187-49; Revision of ASA A1.11-1948)

Method of Test for Soundness of Hydraulic Cement Over Boiling Water (Bat Test) (ASTM C 189-49; Revision of ASA A1.13-1948)

Method of Test for Tensile Strength of Hydraulic Cement Mortars (ASTM C 190-49; Revision of ASA A1.14-1948)

Method of Test for Time of Setting of Hydraulic Cement by the Vicat or Gillmore Needles (ASTM C 191-49; Revision of ASA A1.15-1948)

Sponsor: American Society for Testing Materials

American Standards Reaffirmed—

Specifications for Concrete Building Brick (ASTM C 55-37; ASA A75.1-1942)

Specifications for Sand-Lime Building Brick (ASTM C 73-39; ASA A78.1-1942)

Specifications for Hollow Load-Bearing Concrete Masonry Units (ASTM C 90-44; ASA A79.1-1944)

Specifications for Concrete Masonry Units for Construction of Catch Basins and Manholes (ASTM C 139-39; ASA A73.1-1942)

Specifications for Solid Load-Bearing Concrete Masonry Units (ASTM C 145-40; ASA A81.1-1942)

Methods of Sampling and Testing Concrete Masonry Units (ASTM C 140-39; ASA A84.1-1942)

Specifications for Hollow Non-Load-Bearing Concrete Masonry Units (ASTM C 129-39; ASA A80.1-1942)

Requested by: American Society for Testing Materials

Reaffirmation of American Standards Requested—

Method of Sampling Hydraulic Cement (ASTM C 183-46; ASA A1.2-1948)

Method of Chemical Analysis of Portland Cement (ASTM C 114-47; ASA A1.5-1948)

Method of Test for Fineness of Portland Cement by the Turbidimeter (ASTM C 115-42; ASA A1.7-1948)

Method of Test for Specific Gravity of Hydraulic Cement (ASTM C 188-44; ASA A1.12-1948)

Requested by: American Society for Testing Materials

New Project Requested—

Square Foot and Rentable Areas in Buildings

Requested by: American Institute of Architects

Consumer

American Standards Approved—

Methods of Sampling and Chemical Analysis of Alkaline Detergents (ASTM D501-49; ASA K60.21-1950)

Sponsor: American Society for Testing Materials

In Board of Review—

Specifications and Test Procedure for Household Electric Ranges, C71

Sponsor: National Electrical Manufacturers Association

Electrical Engineering

American Standards Approved—

Relays Associated With Electric Power Apparatus, C37.1-1950 (Revision of C37.1-1937)

Sponsor: Electrical Standards Committee

In Correlating Committee—

Specifications for Rigid Steel Conduit, Zinc Coated, C80.1

Specifications for Rigid Steel Conduit, Enameled, C80.2

Specifications for Electric Metallic Tubing, Zinc Coated, C80.3

Sponsors: National Electrical Manufacturers Association; American Iron and Steel Institute

Designation System for Metal Electron Tube Shells, RMA Std ET-112, NEMA Pub. No. 508, ASA C60.4

Sponsor: Joint Electron Tube Engineering Council

Submitted to ASA for Approval—

Standard on Designations for Electrical, Electronic, and Mechanical Parts and Their Symbols, Z32 (49 IRE 21.S1)

Sponsor: Institute of Radio Engineers

Industrial Control-Standards for Device Designations, Z32

Sponsor: National Electrical Manufacturers Association

Mechanical Engineering

American Standards Approved—

Milling Cutters, Nomenclature, Principal Dimensions, etc, B5.3-1950 Revision of B5c-1930)

Sponsors: National Machine Tool Builders' Association; Metal Cutting Tool Institute; American Society of Mechanical Engineers; Society of Automotive Engineers

Twist Drills, Straight Shank and Taper Shank, B5.12-1950 (Revision of B5.12-1940)

Single Point Tools and Tool Posts, B5.22-1950

Punch and Die Sets, for Two Posts, Punch Press Tools, B5.25-1950

Involute Serrations, B5.26-1950

Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers; National Machine Tool Builders' Association; Metal Cutting Tool Institute

20-Degree Involute Fine-Pitch System, B6.7-1950

Fine-Pitch Straight and Bevel Gears, B6.8-1950

Design for Fine-Pitch Worms and Worm Gears, B6.9-1950

Sponsors: American Society of Mechanical Engineers; American Gear Manufacturers Association

Cast Brass Solder-Joint Fittings, B16.18-1950 (Revision of A40.3-1941)

Sponsors: American Society of Mechanical Engineers; Manufacturers Standardization Society of the Valve and Fittings Industry; Heating, Piping and Air Conditioning National Association

High-Strength High-Temperature Internal Wrenching Bolts, B18.8-1950

Plow Bolts, B18.9-1950

Sponsors: American Society of Mechanical Engineers, Society of Automotive Engineers

Seamless Carbon-Molybdenum Alloy-Steel Pipe for High-Temperature Service, ASTM A 206-48T; ASA B36.22-1950

Welded Alloyed Open-Hearth Iron Pipe, ASTM A 253-47; ASA B36.23-1950

Mechanical Engineering (Continued)

Seamless Chromium-Molybdenum Alloy-Steel Pipe for Service at High Temperatures, ASTM A 280-48T; ASA B36.24-1950

Seamless 1-Percent Chromium, 0.5 Percent Molybdenum Alloy-Steel Pipe for Service at High Temperatures, ASTM A 315-48T; ASA B36.25-1950

Seamless and Welded Austenitic Stainless Steel Pipe, ASTM A 312-48T; ASA B36.26-1950

Welded and Seamless Steel Pipe, ASTM A 53-47; ASA B36.1-1950

Welded Wrought Iron Pipe, ASTM A 72-45; ASA B36.2-1950

Seamless Carbon-Steel Pipe for High-Temperature Service, ASTM A 106-48T; ASA B36.3-1950

Electric-Resistance-Welded Steel Pipe, ASTM A 135-46; ASA B36.5-1950

Electric-Fusion-Welded Steel Pipe (Sizes 4 in. to but not including 30 in.), ASTM A 139-46; ASA B36.9-1950

Sponsors: American Society for Mechanical Engineers; American Society for Testing Materials

Gray Finishes for Industrial Apparatus and Equipment, Z55.1-1950

Sponsor: Mechanical Standards Committee

In Correlating Committee—

Recommended Practice for Mechanical Refrigeration Installations on Shipboard, B59

Method of Rating and Testing Refrigerant Expansion Valves, B60

Sponsor: American Society of Refrigerating Engineers

Abbreviations for Use on Drawings, Z32.13 (Revision of Z32.13-1946)

Sponsor: American Institute of Electrical Engineers; American Society of Mechanical Engineers

American Standards Withdrawn

Tool Shanks and Tool Posts for Lathes, Planers, Shapes, Boring Mills and Turret Lathes, B5.2-1943

Terminology and Definitions for Single Point Cutting Tools, B5.13-1939

Requested by: American Society of Mechanical Engineers; Metal Cutting Tool Institute; National Machine Tool Builders' Association; Society of Automotive Engineers

Withdrawal of American Standards Requested—

Outside Dimensions of Plumbago Crucibles for Non-Tilting Furnaces in Non-Ferrous Foundry Practice, H13-1925

Requested by: Crucible Manufacturers Association; American Foundrymen's Society

Motion Picture

American Standards Approved—

Location and Size of Picture Aperture of 16-mm Motion Picture Cameras, Z22.7-1950

Location and Size of Picture Aperture of 16-mm Motion Picture Projector, Z22.8-1950

Location and Size of Picture Aperture of 8-mm Motion Picture Cameras, Z22.19-1950

Location and Size of Picture Aperture of 8-mm Motion Picture Projectors, Z22.20-1950

Dimensions for Mounting Frames for Theater Projection Screens, Z22.78-1950

16-mm Sound Projector Test Film, Z22.79-1950

Sponsor: Society of Motion Picture Engineers

Standards Submitted to ASA for Approval—

Scanning Beam Uniformity Test Film for 16-mm Motion Picture Sound Reproducers (Laboratory Type), Z22.80 (Revision of Z52.7-1944)

Scanning Beam Uniformity Test Film for 16-mm Motion Picture Sound Reproducers (Service Type), Z22.81 (Revision of Z52.7-1944)

Withdrawal of American War Standards Requested—

Method of Determining the Signal-to-Noise Ratio of 16-mm Sound Motion Picture Prints, Z52.38-1944

Method of Determining the Noise Level of Motion Picture Cameras, Z52.60-1945

Withdrawal requested by: Society of Motion Picture and Television Engineers

Photography

In Correlating Committee—

Dimensions for Amateur Roll Film, Backing Paper and Film Spools, Z38.1.7 (Revision of Z38.1.7-1943 through Z38.1.24-1943)

Approval requested by: Optical Society of America

Safety

American Standards Approved—

Code for Identification of Gas Mask Canisters, K13.1-1950 (Revision of K13-1930)

Sponsor: National Safety Council

What's Happening on Projects

Building Code Correlating Committee—

At its meeting March 24, the Building Code Correlating Committee voted to accept an enlarged assignment of work to include standards for building construction and materials as well as building codes. This will take the responsibility for many of these standards from the Board of Examination which has no correlating function and place it in the hands of the group organized to represent the groups specifically concerned with building problems. Final action will be taken by the Standards Council before the change takes effect.

Reports to the BCCC show the following work under way:

Four standards on fire tests of building construction and materials, A2, may come to the BCCC for action before the end of the year.

Further revision of the latest edition of the Building Exits Code, Z9.1-1949, is under way and proposed changes will be submitted to the National Fire Protection Association at its annual meeting in May.

Active work on a revision of the Building Code Requirements for Masonry, A41.1-1944, has been under way for about a year. A draft was discussed at a two-day meeting early in March. Another meeting will probably be held early in the summer.

Work on interior finishes for the Building Code Requirements for Fire Protection and Fire Resistance is awaiting results from a research program under way at the instance of the National Lumber Manufacturers Association and the Douglas Fir Plywood Association, among others. A report on roofing which has been widely distributed may be acted on soon. Reports on protection of openings and on height and area limitations have been referred to special subcommittees. Recent studies by the Joint Committee on Unification of Building Codes are being considered by the subcommittee on classifications and definitions. This subcommittee is also considering the problem of fire stopping of floors. Recommendations on classifications of occupancies, prepared and circulated more than two years ago, are being modified to conform to suggestions of the Joint Committee.

Work on Building Code Requirements for Chimneys and Heating Appliances is being resumed, based on research by the National Bureau of Standards and the Housing and Home Finance Agency.

Reorganization of the Sectional Committee on Building Code Requirements for Light and Ventilation, A53, is practically complete.

Studies of wind velocities to be made by the Weather Bureau will form the basis for a new weather map to be included in a revision of the standard on Building Code Requirements for Minimum Design Leads in Buildings, A58.1-1945. Research on earthquakes now under way on the Pacific Coast also will be used by the committee in studying a revision.

A revision of the Building Code Requirements for Reinforced Concrete, A89.1-1948, is being considered by the American Concrete Institute, sponsor.

A suggestion that a standard be prepared for design loads for radio towers and other high towers has been referred to the Executive Committee of the BCCC.

Ball and Roller Bearings, B3—

Sponsor: Mechanical Standards Committee

A letter ballot vote is being taken by the sectional committee on a proposed American Standard, Tolerances for Ball and Roller Bearings, B3.5. This is the second in a series of which the American Standard, Gaging Practices for Ball and Roller Bearings, B3.4-1950, was the first to receive ASA approval. A proposed American Standard on boundary dimensions of bearings is also under way.

Allowances and Tolerances for Cylindrical Parts and Limit Gages, B4—

Sponsor: American Society of Mechanical Engineers

The British Standards Institution and the Canadian Standards Association have submitted to the ASA, drafts of their proposed standards for Limits and Fits for Engineering and Manufacturing with the idea that they might be given consideration by Sectional Committee B4 as a possible basis for establishment of a unified American-British-Canadian System of Limits and Fits. The drafts have been referred to Committee B4. The British draft is a proposed revi-

sion of the British Standard Limits and Fits for Engineering, BS 164-1941.

Code for Pressure Piping, B31—

Sponsor: American Society of Mechanical Engineers

Sections 1, 3, 4, and a portion of Section 6 of the new edition of the Code for Pressure Piping are now being voted on by the sectional committee.

Wire and Sheet Metal Gages, B32—

Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers, Inc

In the course of overhauling and investigating the status of standards under their sponsorship to keep them up to date, the sponsors have called a meeting of this sectional committee to be held April 25.

Electric and Magnetic Magnitudes and Units, C61—

Sponsor: Electrical Standards Committee

American recommendations on questions affecting the MKS system are being prepared by the sectional committee for consideration at the meeting of the International Electrotechnical Commission's Committee 24 on Electrical and Magnetic Magnitudes and Units. This committee will meet in Paris July 18 and 19.

Rayon Fabrics, L22

Sponsor: National Retail Dry Goods Association

Dr Jules Labarthe, Jr, senior fellow at the Mellon Institute of Industrial Research, has been appointed vice-chairman of the Promotion and Administration Committee of L22. This group is to coordinate on a national scale advertising, promotion, and education for a program of certification and labeling in connection with the proposed standards for rayon fabrics.

Dr Labarthe will head the administrative subcommittee, which will formulate the program for certification and labeling, inspection, and terminology. Harold R. Merahn, sales promotion manager and vice-president of Gertz Department Stores, Jamaica, N. Y., is chairman of this Promotion and Administration Committee, and in charge of the subgroup which will plan for promotion and advertising in connection with this program.

Safety Code for Paper and Pulp Mills, P1—

Sponsor: National Safety Council

A meeting of the sectional committee April 4 discussed subcommittee reports as a first step toward preparation of a draft as a revision of the 1936 edition of this American Standard safety code.

Gas Burning Appliances, Z21—

Sponsor: American Gas Association

A change in scope to permit this Committee's work to include installation of low-pressure gas piping in buildings has been requested by the sponsor. The request has been referred to the Board of Examination for recommendation to Standards Council. The withdrawal of the American Standard Gas Safety Code for Installations and Work in Buildings, K2-1927, and American Recommended Practice for the Installation, Maintenance, and Use of Piping and Fittings for City Gas, Z27-1933, has left the way open for new work on this subject, the AGA points out. The scope as proposed would read: "Establishment of minimum or basic requirements for installation, performance, safe operation, and substantial and durable construction for gas burning appliances and gas piping in buildings, together with such laboratory methods of test as are necessary for determining compliance therewith."

Safety in Electric and Gas Welding and Cutting Operations, Z49—

Sponsor: American Welding Society

Simon Greenburg, technical director of the American Welding Society, and secretary of the Z49 committee, announces that the new edition of this standard has been approved by the sectional committee. This first peacetime revision of an American War Standard is being considered by the sponsor for submittal to the American Standards Association.

Safety Color Code for Marking Physical Hazards, Z53—

Sponsor: National Safety Council

Subcommittee reports were discussed at a meeting of the recently organized sectional committee which is now working on a first draft of a peacetime standard to replace the American War Standard Safety Color Code for Marking Physical Hazards and the Identification of Certain Equipment, Z53.1-1945.

Reuel C. Stratton, Supervision Chemical Engineer, Travelers Insurance Company, Engineering and Inspection Division, Hartford, Connecticut, is chairman of the committee, Arthur Kelly, senior engineer, Industrial Department, National Safety Council, Chicago, has been named secretary.

Standardization of Optics, Z58—

Sponsor: Optical Society of America

Comments have been received and correlated on the Proposed American Standard Nomenclature for Radiometry and Photometry, Z58.1.1 and Proposed American Standard Nomenclature and Definitions in the Field of Colorimetry, Z58.1.2 following a six months trial period. The proposed American Standards are now being voted on by the sectional committee.

What Safety Means

(*Continued from page* 113)

critically at his plant. By placing "extra" guards on his machines, he gives his workers a sense of security—a tangible evidence that he is interested in their well-being. Through these little "extras" the employer manifests his own safety-consciousness. (Aside from the purely safety angle, equipment that is well maintained and well guarded usually receives better treatment at the hands of the workman than equipment which the owner has neglected.) Employees take pride in the interest that is shown in their welfare and in good physical surroundings in the plant. This sense of pride translates itself into high quality production, and attracts a high type of labor to the plant.

Having done everying in his power to make his plant and equipment safe, the employer is ready to turn to his workers. It is a well known fact that about 90 percent of accidents are caused by human failings. The first step in overcoming the human weakness is education—general instruction, yes; but even more important, specific instruction. If Joe spends his day lifting bags of flour, show him how to lift properly—and then watch to see that he's doing it that way.

Fashionable Safety

After you've shown everybody how to do the job safely, you have to make that way of doing it popular. Safety precautions will be flouted behind your back unless you make safety fashionable. No one can tell anyone else exactly how to do this. It is accomplished by that complicated formula that we call "management"—a little quiet talk, a lot of example, a word of praise, a thought-provoking poster, public recognition of a good record, commendation when a man does the right thing. Mix it up according to your own recipe.

In this whole process of developing safety-mindedness in the plant, the foreman holds the key to success. He must be thoroughly saturated with the idea that safety is an integral part of his job, not something separate and additional. The foreman is Management to the man in the shop, and always close at hand. Hence he is in a position to give safety the constant attention it requires. One of the most important things we must recognize in regard to the safety pro-

gram is that it is a continual process with no let-up—not just a meeting once a month.

If in repeating this old story I have induced someone to do something "extra" that will save even one hand, my effort will have been well worth while. We already know enough techniques of accident prevention to make our industrial plants safe: our task is to put to work the knowledge we have.

If you are not familiar with the Safety Code for Bakery Equipment, I suggest that you get a copy from the American Standards Association. Give it to the safety engineer of the company which carries your Workmen's Compensation Insurance. Ask him to analyze, with you, your equipment, and your methods of using it. And then—make the necessary corrections.

If, after reading this article, you are still not convinced that a safety program is important to you and your plant, I have one more suggestion: The next time a man is seriously injured in your bakery, go, yourself, to his home and tell his family. Sit with them and comfort them and explain to them why that accident had to happen and why you couldn't have prevented it.

Recognition

(*Continued from page* 120)

of their regulations, because it was acceptable to all of the parties concerned, including the users of these abrasive wheels—the group with whom the regulatory bodies had to deal.

Since the original development of this code, revisions have been approved in 1926, 1930, 1935, 1943, and 1947. Through 1935, the standard required that protective hoods be made of iron or steel. In 1938, the Aluminum Company requested that study be given to protective hoods made of aluminum alloys, particularly for use on portable grinding wheels, where the question of weight was important. The sponsors conducted tests of aluminum hoods, and in the next revision of the code permission was granted for the use of "other materials" if the hoods were so designed that they would be as strong or stronger than the hoods specifically mentioned in the code.

The sponsors have done an excellent job of keeping this standard up to date. In the early war years there was a tremendous increase in the use of mounted wheels and points. One of the sponsors spent more than $10,000 in research in order to establish safe operating conditions. They found that proper recognition of the "critical speed" is the most important factor in the safe operation of mounted points and mounted wheels. Every spindle with a wheel or point mounted in it has a certain critical speed at which vibration tends to become excessive. Operation at the critical speed is apt to result either in sever bending or fracture of the spindle. This critical speed varies with the dimensions of the wheel, the diameter of the spindle, and the distance from support to base of wheel. As a result of this research, pages upon pages of tables of critical speeds for wheels and points of various shapes and sizes were included in the 1943 edition. By means of these tables, the safe operating speed of the wheels and points can be easily computed so anyone using them can operate them at a safe speed.

Members of subcommittee I of ASA Sectional Committee C39, Electrical Indicating Instruments, currently working on the standardization of panel-switch board and portable instruments are: (seated, left to right) *A. W. Daschke*, Bell Telephone Laboratories; *D. A. Young*, Westinghouse Electric Corporation; *J. H. Miller*, Weston Electrical Instrument Corporation; *D. Hoffman*, ASA; *R. H. Grant*, Materials Laboratory, New York Naval Shipyard; (standing) *H. C. Koenig*, Electrical Testing Laboratories, Inc; *F. X. Lamb*, Weston Electrical Instrument Corp; *E. E. Scott*, Armed Services Electro Standards Agency; *G. F. Walter*, Public Service Electric and Gas Co, Maplewood, N. J.; *J. W. McNair*, ASA; *E. E. Fenstermaker*, Roller-Smith Division of Realty and Industrial Corp; and *D. B. Fisk*, General Electric Co.

News Briefs

• • General Cable Corporation, in its recently published catalog on weatherproof wires and cables, identifies the different types that meet the requirements of American Standard C8.18-1948. For the information of users, the standard specifications are reproduced in the catalog.

• • Howard Coonley, chairman of ASA's Executive Committee, has been named as consultant to the National Security Resources Board. Presidential Assistant John R. Steelman, acting chairman of the board, announced that Mr Coonley will assist in the study of problems of conservation, substitution, and standardization as they relate to mobilization planning. He will work under the supervision of Frank M. Shields, director of NSRB's Production Office.

• • Two new and two revised American Standards for machine tools covering punch and die sets for two-post, punch press tools; involute serrations; single-point tools and tool

posts; and twist drills, straight shank and taper shank, have been approved as American Standard.

They are part of a series of American Standards for small tools and machine tool elements which have been developed by a technical committee organized under the procedure of the American Standards Association, and sponsored by the American Society of Mechanical Engineers; Society of Automotive Engineers; National Machine Tool Builders' Association; and the Metal Cutting Tool Institute.

The new American Standard, Punch and Die Sets for Two-Post, Punch Press Tools, (B5.25-1950) covers the design and dimensions of back-post sets and diagonal-post sets which are in general demand by tool designers, and are used by die makers for the mounting of punch-press tool details. The types and range of sizes have been selected to meet the largest volume of users' needs and may be manufactured on a continuous production basis.

The American Standard, Involute Serrations (B5.26-1950) was prepared to replace the SAE Serrated Shaft Standard. It provides a uniform, easily fabricated set of serrations that can be made by several manufacturing processes. The range of teeth provides diameters both smaller and larger than the old standard, with the result that there is a much greater selection of sizes. In addition, a new table has been inserted containing a list of allowable errors and effective fits.

The revised American Standard, Single-Point Tools and Tool Posts (B5.22-1950) contains three new sections on standard types of single-point tools, in addition to standard terminology, definitions, and sizes of tools and tool holders contained in earlier standards. It represents a combination and revision of American Standard, Tool Shanks and Tool Posts for Lathes, Planers, Shapers, Boring Mills, and Turret Lathes, B5.2-1943, and the American Standard, Terminology and Definitions for Single-Point Cutting Tools, B-5.13-1939.

The revised American Standard for Twist Drills, Straight Shank and Taper Shank (B5.12-1950) contains four major changes from the 1940 edition. The tolerances set on various features of drills now provide interchangeability of products of different manufacturers in the users' plants. Taper shank drills have been included and the sequence of diameters of straight drills has been changed to correspond to the actual sizes purchased and used in industry. All three series of number size, letter size, and fraction size drills have corresponding lengths.

These American Standards are being published by the American Society of Mechanical Engineers and when available may be obtained from the ASME, 29 West 39 Street, New York 18, N. Y., or from the American Standards Association, 70 East 45 Street, New York 17, N. Y.

Olmsted Named by API As ASA Board Member

C. E. Olmsted, vice-president and director of The Texas Company, has been named as a new member of the Board of Directors of ASA, to complete the unexpired term of John R. Suman, who resigned recently. Mr Olmsted was nominated by the American Petroleum Institute. He has been a member of API practically since its organization following the first World War. He has had experience in oil refining, transportation, marketing, and production. For 15 years before coming to New York he was with The Texas Company in Los Angeles, California.

• • W. E. Mallalieu, general manager of the National Board of Fire Underwriters, announces appointment of John A. Neale as NFPA chief engineer. Mr Neale is at present vice-president and chief engineer of the Underwriters Laboratories, Inc of Chicago. Mr Neale has worked actively on standards as a member of the NFPA technical committees and as a member of a number of committees under the procedure of the American Standards Association.

• • For 1950 the Building Code Correlating Committee has re-elected its officers and named the members of its executive committee:

Theodore Irving Coe, *chairman;* American Institute of Architects

Morgan Strong, *vice-chairman;* Conference of Mayors and Other Outdoor Municipal Officials of the State of New York; representing, American Municipal Association

Executive Committee:

J. L. Barron, National Biscuit Company; representing, American Public Health Association

C. T. Bissell, National Board of Fire Underwriters

E. W. Roemer, Engineers Club, Brookline, Mass.; member-at-large

Miles N. Clair, Thompson and Lichtner Company; representing, American Society of Testing Materials

C. A. Willson, American Iron and Steel Institute; representing, American Society of Civil Engineers

Newly appointed as a member of the BCCC is R. C. Corson, structural engineer, Associated Factory Mutual Fire Insurance Companies.

• • The Research Institute of America has tabulated 1,100 replies to a survey and found that "sales" was the number one worry of business with "cost cutting" a quick second. If standardization may not directly influence the sale of a company's product, it is a natural for more effective cost cutting. ASA recommends management's attention to wider use of national standards and more active participation in the standardization program as one frequently underestimated "headache" remedy.

• • The Safety Code Correlating Committee has re-elected the follow-

ing officers, and members of the executive committee, for 1950:

Harold L. Miner, *chairman;* manager, Safety and Fire Prevention Division, E. I. du Pont de Nemours and Com-

(*Continued in next column*)

Voltage Regulators

(*Continued from page* 111)

Members of the Working Group on Test Code for Accuracy of Control Devices, which prepared the revised Accuracy Standard and Test Code for regulators, were:

W. E. Birchard, General Electric Company, Pittsfield, Mass., *Chairman*
J. A. Adams, Philadelphia Electric Company, Philadelphia, Pa.
A. R. Christlieb, Public Service Company of New Hampshire, Manchester, N. H.
S. Freeman, Jr, Purdue University, Lafayette, Indiana
T. L. Rundlett, Westinghouse Electric Corporation, Sharon, Pa.
W. C. Sealey, Allis-Chalmers Mfg Company, Milwaukee, Wisconsin
T. Seely, Public Service Electric & Gas Company, Newark, N. J.

This Working Group operated under the auspices of the Step-Voltage and Induction-Voltage Regulator Subcommittee and the Test Code Subcommittee of the ASA Sectional Committee on Transformers, Regulators, and Reactors, C57. Members of the Regulator Subcommittee are:

J. R. North, Commonwealth Services, Inc, Jackson, Michigan, *Chairman*
J. E. Clem, General Electric Company, Schenectady, N. Y.
A. A. Johnson, Westinghouse Electric Corporation, East Pittsburgh, Pa.
D. L. Levine, Commonwealth Edison Company, Chicago, Ill.
C. V. Moberg, Consolidated Gas Electric Light and Power Company, Baltimore, Md.
W. C. Sealey, Allis-Chalmers Manufacturing Company, Milwaukee, Wisconsin

Chairman of the Test Code Subcommittee is J. E. Clem, General Electric Company, Schenectady, N. Y.

These two standards are part of a volume of 19 American Standards which provide comprehensive requirements, test codes, and guides for operation of transformers. The entire volume is available from ASA at $4.00. Copies of the revised American Standard Step-Voltage and Induction-Voltage Regulators, C57.15-1949, and the new American Standard Test Code, C57.25-1949, can be obtained at 50 cents each.

pany, Incorporated; representing, National Fire Protection Association
Arthur S. Johnson, *vice-chairman;* manager engineering department, American Mutual Liability Insurance Company; representing, National Association of Mutual Casualty Companies

Executive Committee:

J. J. Bloomfield, assistant chief, Industrial Hygiene Division, U. S. Public Health Service
Myron P. Davis, Otis Elevator Company; representing, American Society of Testing Materials
John A. Dickinson, head, Safety Codes Group, National Bureau of Standards
John M. Roche, director, Industrial Division, National Safety Council

New member of the Executive Committee for 1950 is R. C. Sogge, manager, Standards Division, Executive Department, General Electric Company; representing, National Electrical Manufacturers Association.

• • Paul Arnold, Ansco Division of General Aniline and Film Corporation, Binghamton, New York, has been named chairman of a new committee set up by the American Standards Association to coordinate and systematize work on standards for photographic and motion picture materials, equipment and processes.

The new correlating committee will have the responsibility for supervising all the technical work, national

Paul Arnold

and international, on photography and cinematography under the procedure of the American Standards Association.

It will determine whether new standards are needed, will approve the membership of technical committees, and will determine whether the standards completed by the technical committees have been agreed upon by all groups concerned who have an important interest, as required before a standard can qualify as American Standard.

Work already completed by committees sponsored by the Optical Society of America and the Society of Motion Picture and Television Engineers under the procedure of the American Standards Association has resulted in approval of over 210 American Standards covering a wide range of photographic and motion picture equipment, camera parts, projector parts, paper, film, and methods of processing. Interchangeability and more reliable results to users of photographic prints and motion pictures are the purpose of these standards.

The following were represented at the organization meeting of the new committee: Department of the Navy; Optical Society of America; Photographic Manufacturers' Group; Ansco Division of General Aniline and Film Corporation; E. I. du Pont de Nemours & Company; Eastman Kodak; Photographic Society of America; Society of Motion Picture and Television Engineers.

• • The Western Interstate Committee on Highway Policy Problems decided at its meeting in February to urge authorities in its 11 member states to adopt and follow the American Standard Manual on Uniform Traffic Control Devices.

Standards and Labels

(*Continued from page* 128)

This volume, though it emphasizes the value of standards and labels, does not develop convincingly the hypothesis that the average store customer wants them or will use them. Perhaps it is the fact that this has never been demonstrated to the satisfaction of industry that is the cause of some of the industry opposition or lack of cooperation in standards development.

W. L. Batt Elected to ASA Board

WILLIAM L. BATT, president of SKF Industries, Inc, has been elected to membership on the Board of Directors of the American Standards Association. He was nominated by the American Society of Mechanical Engineers to succeed A. G. Pratt, chairman of the Board of the Babcock & Wilcox Company, who is retiring from active duties.

Mr Batt is a past president of the ASME.

In wartime service Mr Batt held such high-ranking posts as vice-chairman of the War Production Board, U.S. member and representative on the Combined Raw Material Board, and the Combined Production and Resources Board, and chairman of the Inter-Agency Policy Committee on Rubber. For these services he was awarded the Medal for Merit by President Truman.

Speaking of his important service in the international standardization of screw threads, Mr Batt explains:

"As vice-chairman of the War Production Board, and U.S. representative on the Combined Production and Resources Board, I became actively interested early in the war in the problem of standardization. The lack of interchangeability of identical parts of British and American war equipment because of trifling differences in the threads of nuts, screws, and bolts added millions upon millions of dollars to our costs and revived the issue in aggravated form.

"Because of the extreme seriousness of the situation, the job of arriving at a common standard, which had been going on for years, was tackled by the official machinery of the United States, Great Britain, and Canada. This was set in motion by the Combined Production and Resources Board and led to the adoption of a temporary wartime standard for thread screws."

After hostilities ended, the negotiations continued, so far as U.S. participation was concerned, through the peacetime machinery of the American Standards Association and

W. L. Batt

through the Society of Automotive Engineers and the American Society of Mechanical Engineers as sponsors for Sectional Committee B1 on Screw Threads.

To facilitate negotiation on the international level, the Sponsors Council was formed with Mr Batt as chairman. In this capacity Mr Batt was influential in securing agreement on the international level.

Present Affiliations

At the present time, Mr Batt is a member of the Department of Commerce Business Advisory Council and President Truman's Committee on Voluntary Aid, and is national chairman of the Citizens' Committee for the International Trade Organization.

Mr Batt is well known in management circles as former chairman of the Board of the American Management Association and past president of the International Committee of Scientific Management. He presided over the Eighth International Congress of this International Committee in Stockholm, Sweden, in July 1947. He is an honorary member of the American Society of Mechanical Engineers, the Engineering Institute of Canada, and the Institution of Mechanical Engineers of England, as well as a member of the Society of Automotive Engineers and Director of the National Policy Committee.

Wood Poles

(*Continued from page* 119)

ered by the older specifications and those in the American War Standard having peacetime use.

Most Widely Used

The chaiman of the O5 Committee recently stated that in his opinion the American Standard covering wood poles approved in 1948 is the most widely used of any specification for a fabricated wood product. Dr. H. S. Osborne, chief engineer of the American Telephone and Telegraph Company, has said that the telephone companies are saving $50,000 per year by the use of this standard for joint-use poles alone. The National Electrical Safety Code (C2), which covers the safety requirements for pole lines and is incorporated in the regulations of many states, also uses the fibre stress values asigned by O5.

The standardization job done by the O5 Committee has eliminated almost completely the confusion which existed prior to the initiation of the work. The project, which started to coordinate existing specifications, now is concerned with adapting the standards to changing conditions.

Fibre Stress Values

Some difference of opinion has developed among the members of the committee concerning the fibre stress values assigned to the various species of wood. Breaking tests on full-size poles have always been expensive and time-consuming, so in recent years considerable dependance in deciding upon fibre stress values has been given to modulus of rupture tests on small, clear pieces of wood cut from green poles. Some members of the committee would be better satisfied if more full-scale testing could be done. A committee of the American Society for Testing Materials is undertaking to sponsor such testing. When the results are available they will be brought to the attention of Committee O5 for consideration.

American Standards Check List

No. of Copies	TITLES OF AMERICAN STANDARDS JUST PUBLISHED	Price
	American Standard Specifications for Rubber Protective Equipment for Electrical Workers	$ .50
..... J6.1-1950	**Rubber Insulating Line Hose (ASTM D1050-49T)**	
J6.2-1950	**Rubber Insulator Hoods (ASTM D1049-49T)**	
J6.4-1950	**Rubber Insulating Blankets (ASTM D1048-49T)**	
J6.5-1950	**Rubber Insulating Sleeves (ASTM D1051-49T)**	
	Separate specifications for rubber blankets, hoods, line hose and sleeves; bound into one American Standard to make a valuable document for all concerned with the use of rubber protective equipment for electrical workers. See the April issue of STANDARDIZATION for pictures and description of the equipment, and text on application of the standard. (*Sponsor:* American Society for Testing Materials; Edison Electric Institute)	
..... Z22.78-1950	**Mounting Frames for Theatre Projection Screens, Dimensions for**	.25
	Over-all screen sizes, and minimum inside dimensions of frames are given in a table for screen sizes no. 8 to 30. (*Sponsor:* Society of Motion Picture and Television Engineers)	
..... Z22.79-1950	**16-Millimeter Sound Projector Test Film**	.25
	This American Standard describes a film to be used for qualitatively checking and adjusting 16-mm motion picture sound projection equipment and for judging the acoustical properties of the room in which the sound is reproduced. (*Sponsor:* Society of Motion Picture and Television Engineers)	
..... K34.1-1949	**Raw Linseed Oil, Specifications for (ASTM D234-48)**	.25
..... K35.1-1949	**Boiled Linseed Oil, Specifications for (ASTM D260-48)**	.25
	Separate publications giving American Standard specifications and methods of testing for raw and boiled linseed oil. (*Sponsor:* American Society for Testing Materials)	

No. of Copies	TITLES OF AMERICAN STANDARDS JUST PUBLISHED	Price
..... C72.1-1949	**Household Automatic Electric Storage-Type Water Heaters**	.90
	Technical information related to the manufacture of electric water heaters for reference by users and manufacturers. This American Standard contributes to the satisfactory use and manufacture of electric water heaters. (*Sponsor:* National Electrical Manufacturers Association)	
..... L14.21-1949	**Woolen Yarns, Tentative Specifications and Methods of Test for (ASTM D403-48T)**	.25
..... L14.22-1949	**Worsted Yarns, Tentative Specifications and Methods of Test for (ASTM D404-48T)**	.25
	Material specifications, packing directions and methods of test for woolen and worsted yarn, in separate American Standards. (*Sponsor:* American Society for Testing Materials)	
..... Z11.61-1949	**Congealing Point of Pharmaceutical Petrolatums, Method of Test for (ASTM D938-49)**	.25
	This method covers the test for determining the congealing point of pharmaceutical petrolatums or blends of such materials. (*Sponsor:* American Society for Testing Materials)	
..... Z11.62-1949	**Measurement of Density of Hydrocarbon Liquids by the Pycnometer, Method for (ASTM D941-49)**	.25
	Two procedures are covered in this method for measuring the density of any hydrocarbon material that can be handled in a normal fashion as a liquid at the specified test temperatures of 20 and 25 C. (*Sponsor:* American Society for Testing Materials)	
..... Z11.63-1949	**Oxidation Stability of Gasoline (Induction Period Method), Method of Test for (ASTM D525-49)**	.25
	This method covers the test for determination of the stability of gasoline under accelerated oxidation conditions. The induction period may be used as an indication of the tendency of motor gasoline to form gum in storage. (*Sponsor:* American Society for Testing Materials)	

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